BC hydro

ANNUAL REPORT 1989

Letters to the Editor

The following is a letter sent by Mrs. Elaine Gustafson of Fauquier to Larry Bell, Chairman of B.C. Hydro in Vancouver.

I have meant to write to you for some time to thank you for the excellent service we have received through Mr. Art Allan of B.C. Hydro in Nakusp.

Our home is connected to Hydro lines in such a way that everyone can be reconnected after a power outage, and we will still be without power. Recently, we lost power around 11:00 p.m. I phoned in and Mr. Allan told us that there were many problems that night, and that they would attend to the matter. I told him my husband had to be up at 5:00 a.m. to go to work.

Around 1:00 a.m. Mr. Allan phoned to see if we had power yet, my reply was no. At 5:00 a.m. Mr. Allan was on the phone checking to see if our power had come on – (it had just come on previous to his call.)

The point is, Mr. Allan had been up all night. He was concerned about our need and was confirming for himself what our position was.

I want to commend this gracious, caring kind of service. In a world that is so interested in 'self and ease' I believe that Mr. Allan's kind of service is exceptional and so outstanding that I want you to know about our appreciation of this wonderful employee.

Elaine E. Gustafson.

proud of our Service

CHAIRMAN'S LETTER

I am delighted, on behalf of the Board, management and all employees of B.C. Hydro, to submit the 1989 annual report.

This year's report is about service – the service we provide the large majority of British Columbians through a reliable, efficient and economically-priced supply of electricity.

It is our task to provide our customers with the electric energy needed to sustain and enhance economic activity in industry and business, and to provide modern comfort in our homes now and in the future. And our challenge is to produce this electricity in a way that meets other public criteria, such as concern for our environment.

We are inviting customers to play a greater role in our business. We are forming advisory committees, stimulating public participation in the planning process, and encouraging British Columbians to use their energy resources as efficiently as possible through the newly-launched Power Smart program.

We are accountable to our customers for our actions. That is why this report not only details our achievements of the past year, but measures these against previous years. We also outline our objectives and describe some of the programs we are putting in place to achieve them.

The progress we have made, and will continue to make, is possible only with the support and efforts of all employees. In this report we name each and every one of the men and women at B.C. Hydro in recognition of their contribution.

All of us at B.C. Hydro take our responsibilities seriously, and it is our goal to serve all our customers competently and enthusiastically.

Yours sincerely,

L.I. (Larry) Bell
Chairman and Chief Executive Officer

BUSINESS OF B.C. HYDRO

British Columbia Hydro and Power Authority is a provincial Crown Corporation established in 1962 to generate, transmit and distribute electricity.

B.C. Hydro's Board of Directors is appointed by the Lieutenant-Governor in Council, and is responsible for the overall direction of the corporation. The corporation's activities are subject to regulation by the British Columbia Utilities Commission.

The third largest electric utility in Canada, Hydro serves more than 1.2 million customers in an area containing over 92 per cent of British Columbia's population. Most of the electricity is generated by hydroelectric plants which are linked to customers by an interconnected system of transmission lines. Those remote communities not connected to this integrated system are served by small local generating plants.

At B.C. Hydro, we are proud of the service we provide to British Columbians.

CORPORATE AND ENVIRONMENTAL AFFAIRS

PUBLIC ATTITUDES TOWARD B.C. HYDRO

B.C. Hydro's strong and positive image among B.C. consumers has been strengthened according to a survey of 600 residential customers.

Commissioned by Hydro and conducted by a major research firm, this annual survey enables us to understand and meet the needs of our customers, and provides standards against which we can measure our progress.

We learned that over 85 per cent of respondents had a positive impression of Hydro, a considerable improvement over the 66 per cent in fiscal 1988.

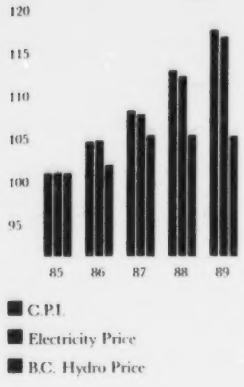
In terms of customer service, the survey said Hydro "is first and foremost a company which provides reliable electricity service and, when service breaks down, it is fast to restore power." On a scale of one to 10, where 10 represents extremely good service, we received a rating of 7.5, comparable to our rating of 7.6 one year ago and again the best of four organizations evaluated.

THE ENVIRONMENT

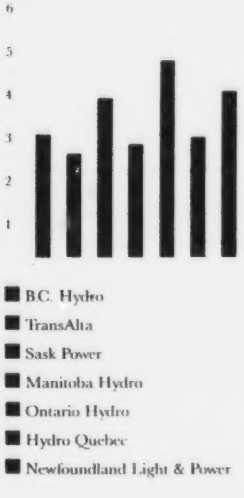
Protecting the environment in which we live has clearly moved from being the concern of a few into the public domain.

The Board of Directors has passed a resolution stating: "In carrying out its business, B.C. Hydro will minimize adverse effects on the natural and social environment and actively pursue opportunities to manage these

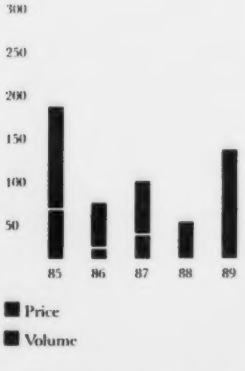
Residential Electricity Prices
(1985 = 100)



Canadian Industrial Rates
as at January 1, 1989
(cents / kWh)



Components of Domestic Revenue Increase
(in millions of dollars)



resources for the benefit of future generations."

With this commitment, Hydro has developed strategies to identify issues, raise the environmental profile within the corporation, involve employees in developing and implementing Corporate Environmental Responsibility principles, and provide opportunities for public consultation.

RATES

Last year's record increase in electric customers, the largest since 1982, was surpassed in fiscal 1988/89 with 26 082 customers added to the system. Of these, over 22 000 were new residential accounts and more than 3500 were commercial and general accounts. We now serve 1.23 million customers in British Columbia.

While substantial system growth continues, our electric rates have remained unchanged since April 1986. Among the lowest set by Canadian utilities, our rates have increased an average of less than one per cent per year since 1984. During this same time, inflation increased four per cent per year.

PLANNING FOR THE FUTURE

Planning processes extending over two decades are important components in accomplishing B.C. Hydro's task of supplying the province's electricity needs, now and in the future.

Electric Load Forecast

The process begins by estimating the amount of electricity required over the next 20 years.

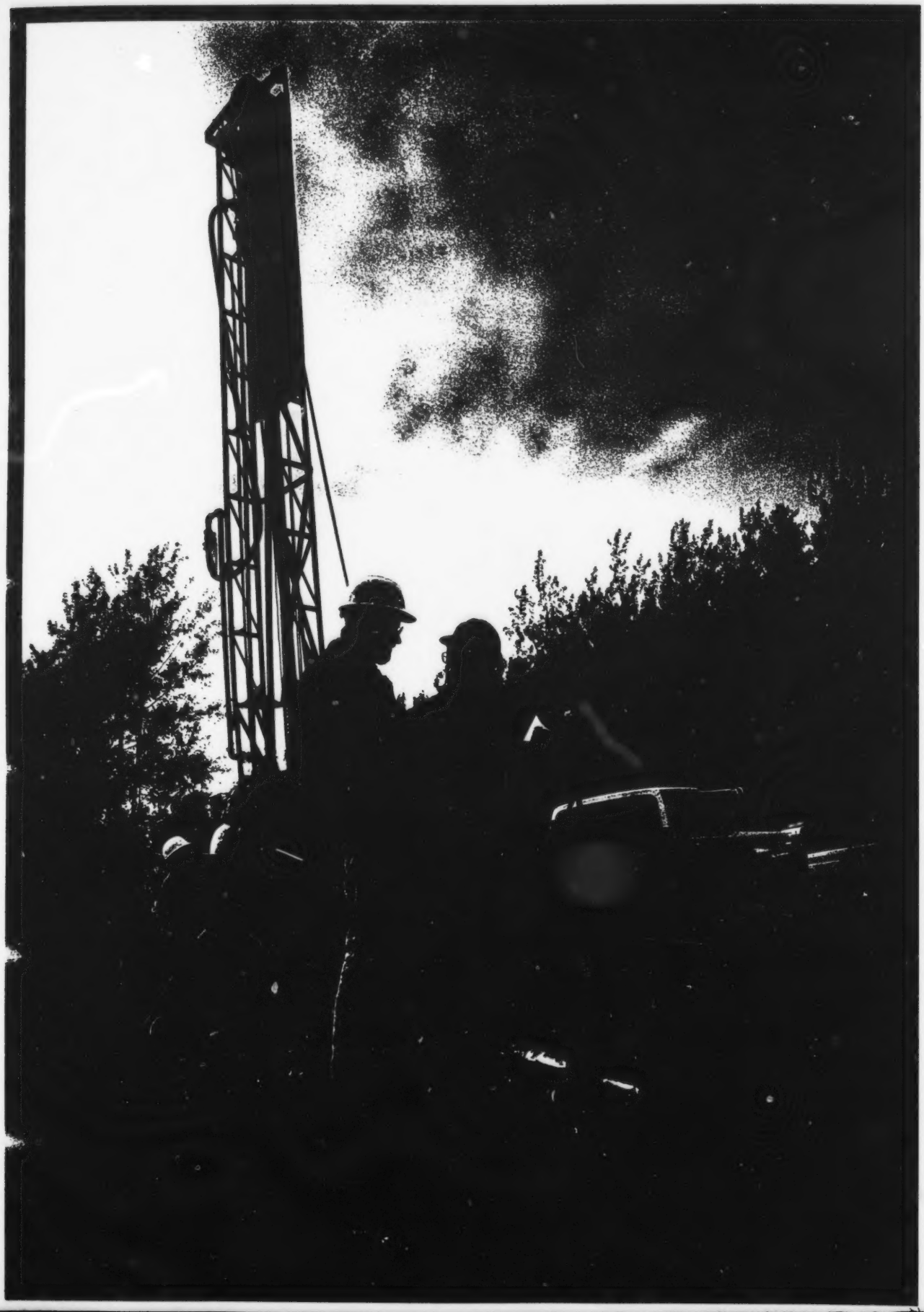
Customer demand projections remain essentially unchanged from last year. In the next two decades, B.C.'s economy is projected to average a three per cent annual growth, and the population a 1.4 per cent annual growth. Electric energy requirements are projected to increase by about 2.8 per cent each year, although energy savings programs such as Power Smart may bring this figure down.

Twenty Year Resource Plan

The Resource Plan outlines the mix of resources which could be used to meet future electrical needs, suggests alternatives and sets out strategies upon which crucial choices can be made.

For the third consecutive year, power demands exceeded projections, hastening the end of the energy surplus that existed in the early 1980s. This means we will require additional energy in the 1990s should load growth continue.

TOP LEFT: CHRIS BOATMAN, VICE PRESIDENT OF CORPORATE AND ENVIRONMENTAL AFFAIRS WITH LES BRAATEN, MAYOR OF HUDSON HOPE. ■ OPPOSITE: B.C. HYDRO GEOLOGIST JOHN PSUTKA (LEFT) AND JIM DENNIS, DRILL INSPECTOR WITH KLOHN-CRIPPEN CONSULTANTS LTD. ARE PART OF THE 1989 EXPLORATION PROGRAM PROJECT TEAM GATHERING ADDITIONAL GEOLOGICAL INFORMATION FOR THE PROPOSED SITE C DAM AT FORT ST. JOHN.

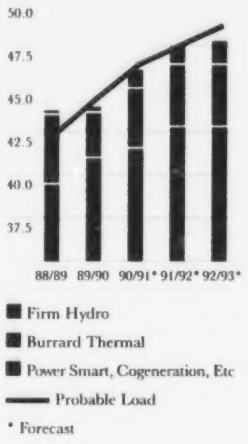


We are now working on a range of alternative choices to building new generating stations, including programs such as Power Smart, which encourages more efficient use of existing energy, and Resource Smart, aimed at making our present facilities more efficient.

Coordination and Purchase Agreements offer the potential of flexible supply. An example is coordination with the Bonneville Power Administration to use reservoir storage at Mica and Bennett dams more effectively. Opportunities will also be provided for purchasing electricity from privately-owned generating facilities. Expansion of Alcan's Kemano Generating Station, for example, is expected to provide 2500 gigawatt hours of firm energy annually, starting in the mid-90s.

At the same time, because of uncertainties in forecasting and long lead times for new generating stations, we have also moved to bring several projects into an advanced stage of study. A project such as Site C on the Peace River, or Keenleyside-Murphy on the Columbia, would then be available should demand increase rapidly, or other options produce less power than anticipated.

Energy Loads and Resources
Operating Year Oct. to Sep.
(Energy in thousands of GW.h)



COMMUNITY INVOLVEMENT

B.C. Hydro is placing a renewed emphasis on community involvement as an important investment in the health and well-being of the areas in which we operate.

As a major partner in Vancouver's new Science World, we have committed $400,000 over three years and appointed a coordinator to ensure access to our expertise and knowledge as exhibits were developed. Eight employees were "loaned volunteers" to the 1988 United Way Campaign while lights on our Head Office building created a "thermometer" of contributions. Community Relations representatives were appointed, open houses invited customers into our operations, and employees have been encouraged to be involved in a variety of activities.

ADVISORY COMMITTEES

As part of our initiative to ensure public concerns are addressed we have formed two Advisory Committees to the Board. The Peace River-Williston Lake group was formed in December and a Columbia River Committee in the Spring of this year. These committees are providing advice to the Chairman and the Board on local issues relating to B.C. Hydro, and on the best means of ensuring public involvement in planning and operating the Peace and Columbia systems.

THE INFLUENCE OF DESIGN ON RELIABILITY

B.C. Hydro is part of one of the largest integrated electric systems in the world, extending from northern British Columbia and Alberta to Mexico, and from the Pacific Coast to Montana, Wyoming, Colorado and New Mexico.

Ensuring reliability is largely the result of cooperative planning, coordinated by the Western Systems Coordinating Council which has developed planning criteria to ensure disturbances in any one of the systems does not impact another. As a member of the WSCC, we plan our electric system in accordance with Council criteria.

Planning our bulk electric system, including generating stations, the 500 kV transmission and substation network and a few key 287 kV and 230 kV transmission lines, follows from WSCC criteria. It relies heavily on computer simulation of the power system that shows how future stages of system development will respond to disturbances, and if WSCC and Hydro planning criteria will be met.

Area transmission (230 kV to 69 kV) and distribution (below 69 kV) comprise the remaining transmission system. Because there are fewer customers affected by a disturbance or outage at these levels than would result from a bulk electric system disturbance, acceptable service reliability can be achieved with less stringent measures.

ELECTRIC SYSTEM DEVELOPMENT PLAN

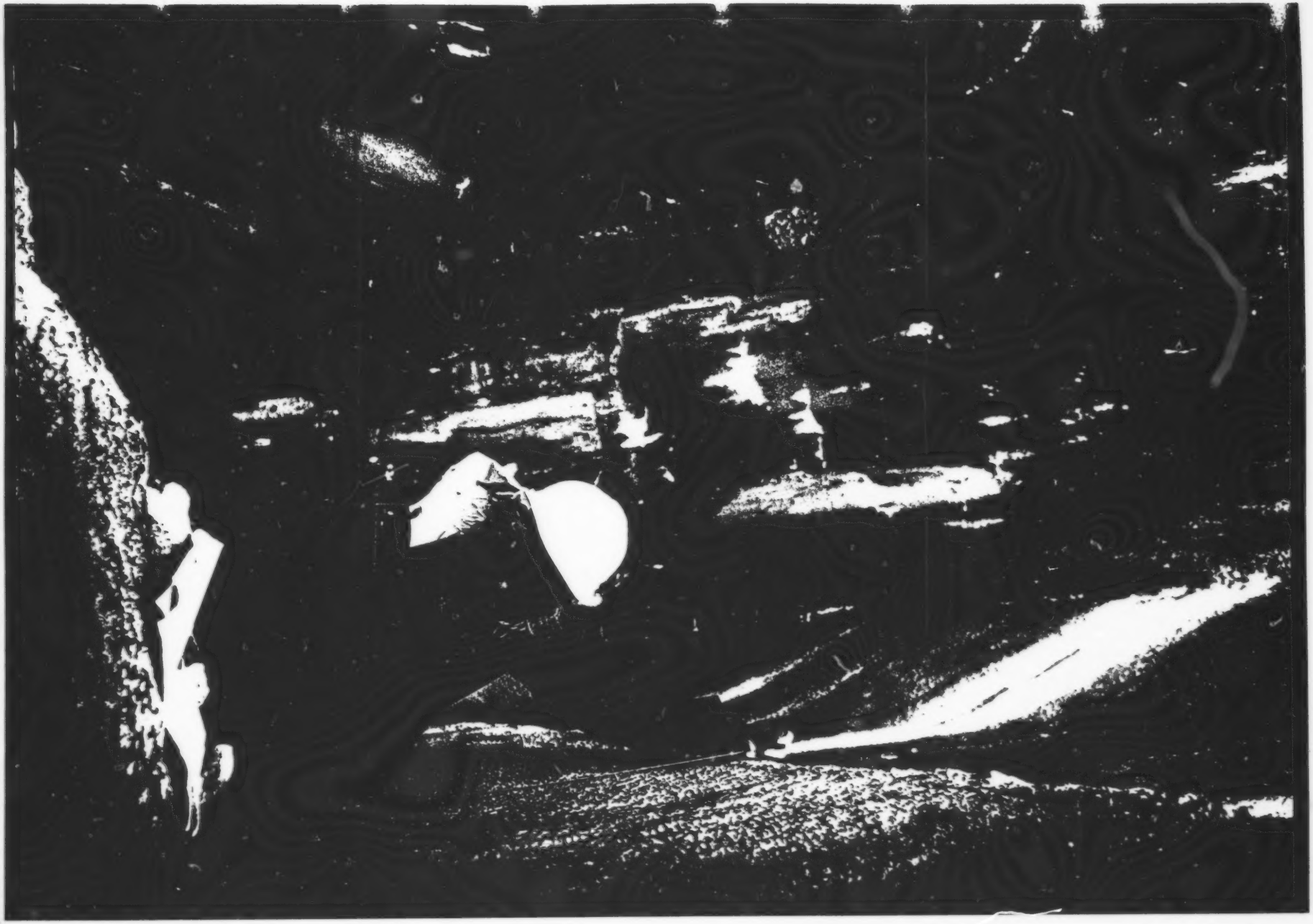
The Electric System Development Plan outlines the actions needed to develop, improve and reinforce the electric system over the next 10 years.

Current best estimates indicate that if trends in customer needs continue, there will be a requirement for a number of additional transmission and substation facilities. These include transmission reinforcements to service new loads, upgrading the Peace River 500 kV transmission capacity, and adding equipment at Nelway Substation to control transmission line power levels and reduce line losses.

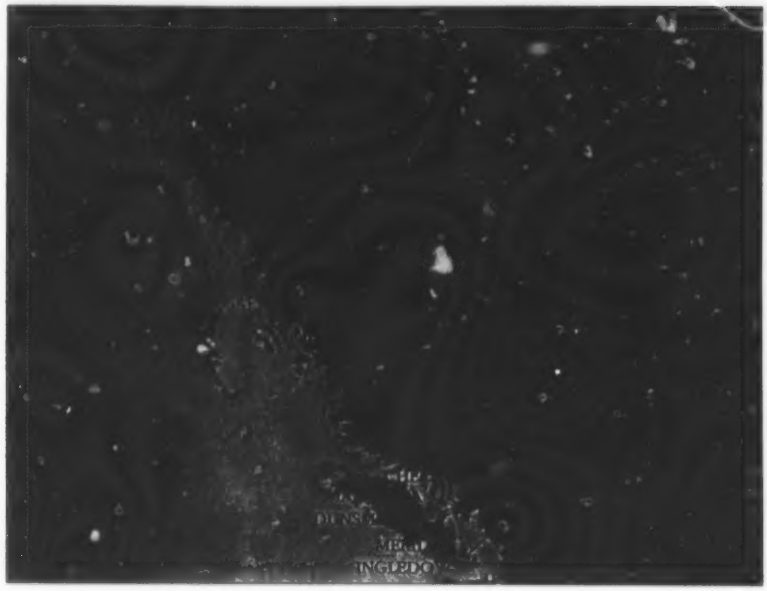
Using purchases and coordination agreements also demands a strong, reliable transmission system. To transmit purchased power from Alcan's Kemano Completion Project to our customers will require a second Skeena to Kitimat 287 kV line and a third Williston to Kelly Lake 500 kV line by 1994.

Planning is also underway for possible 230 kV interties with neighbouring utilities. Puget Sound Power and Light could be connected as early as 1992 and Washington Water Power by 1995.

TOP LEFT: RAY HUNT, VICE PRESIDENT OF SYSTEM DEVELOPMENT WITH EARLE KLOHN, PRESIDENT AND CHIEF EXECUTIVE OFFICER, KLOHN-CRIPPEN CONSULTANTS LTD. ■ OPPOSITE: B.C. HYDRO IS INVESTING $12 MILLION TO REINFORCE THE JORDAN DAM NEAR VICTORIA. CHECKING THE DAM'S FOUNDATIONS IS HYDRO GEOLOGIST JENNIFER GEDDES.



Our Stations capital program now involves 137 projects, of which 62 are associated with transmission additions, three are at generating stations, 46 are to meet distribution requirements and 26 are devoted to miscellaneous items. If anticipated growth in customer needs materializes, capital spending over the next 10 years would amount to approximately $5 billion.



Proposed Provincial 500 kV Transmission Grid to 1997

——— Existing

– – – Proposed

(years shown are calendar years)

0 km 250

0 Miles 160

SERVING INDUSTRY'S NEEDS

Three projects underway in the last fiscal year typify Hydro's commitment to supporting B.C.'s economic growth through the efficient supply of electricity.

A new Kennedy Substation was required to service a newsprint machine being installed at Mackenzie by Findlay Forest Industries. The project was approved in August 1987 and, despite a normal construction schedule of 36 months, was promised for February 1989 to meet newsprint production commitments. Fast-track completion was possible by using surplus transformers, overlapping civil and electrical contractors' work and combining Hydro and contractors' construction forces.

The increase in the mill's annual electrical consumption of 175 gigawatt hours will provide $5.25 million annual revenues.

Environmental considerations were paramount in installing a 148 kilometer, 230 kV transmission line to link Canadian Pacific Forest Products' new $330 million pulp mill at Gold River to the Dunsmuir Substation north of Qualicum.

The line runs through Strathcona Provincial Park, home to the Roosevelt Elk herd. Using special clearing techniques, we were able to maintain and enhance the elks' "browse", and to screen the installation by topping and shaping growth rather than by clear cutting.

Local opposition to the line in the Courtenay area prompted a four day hearing by the B.C. Utilities Commission. The panel considered submissions related to electromagnetic fields and found no reason to re-route the line.

Avalanche considerations are the challenge of the Stewart integration project that will link the town of Stewart (currently powered by costly diesel generator units) to the system grid, and provide power to the new Westmin mine 25 kilometers north of the town.

The 138 kv, 173 kilometer wood pole line follows existing roads but passes through Bear Pass, one of the most avalanche prone areas in the province. This unique design problem has been met by providing avalanche protection at structural sites and installing special heavy-duty steel pole structures in vulnerable areas to help ensure a reliable energy supply. Major contracts for much of the right-of-way clearing for the Stewart line were awarded to the Nisga'a and Kitwancool Native Indian bands.

RESOURCE SMART

System Development, in cooperation with Production and Corporate and Environmental Affairs, has launched Resource Smart, with the objective of providing additional energy through more efficient use of existing resources.

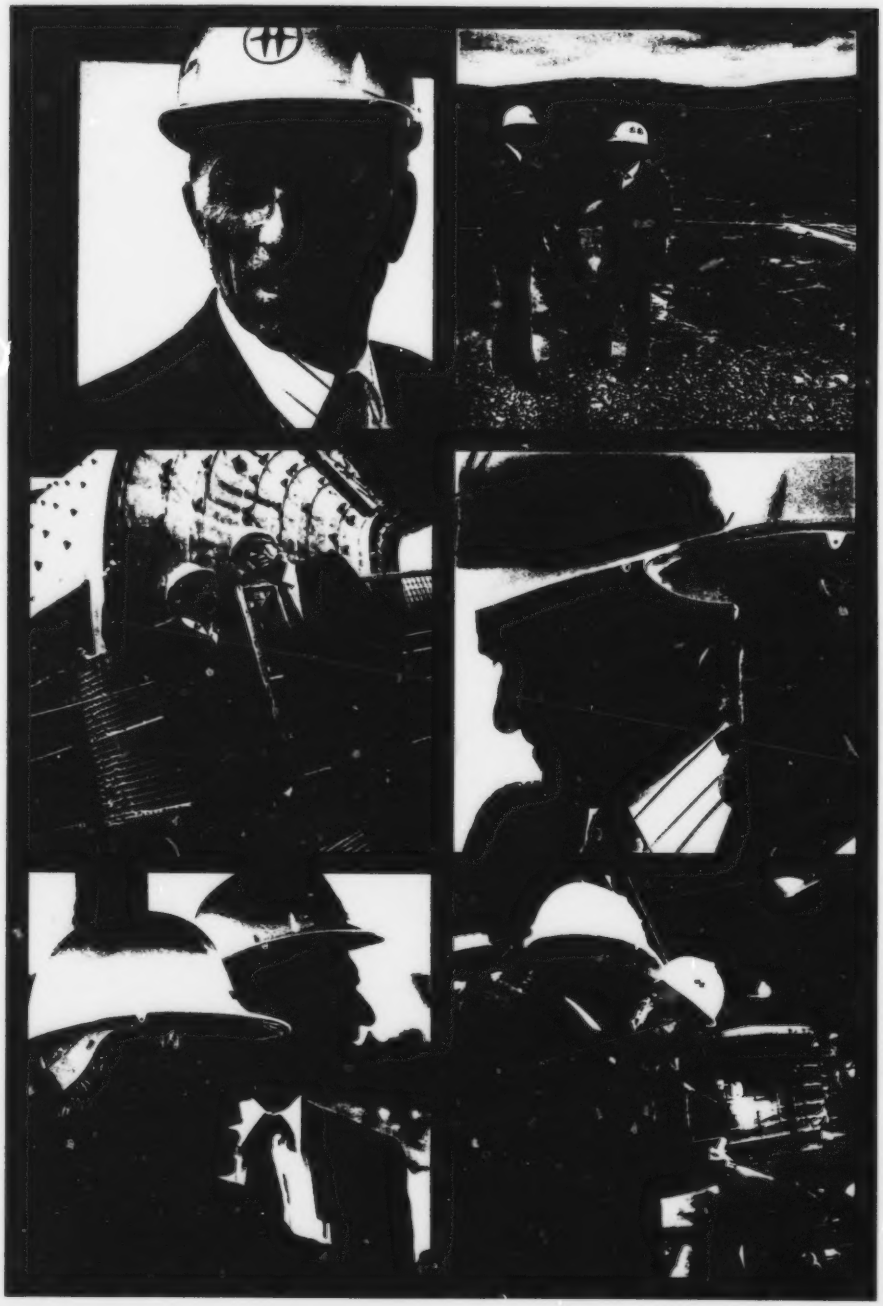
Several projects considered economically feasible offer potential savings of 3800 gigawatt hours annually. These include about 1000 gigawatt hours per year to be gained by installing generating equipment at the Keenleyside Dam, and another 300 gigawatt hours per year by installing a fourth generator at the Seven Mile Plant.

PRODUCTION

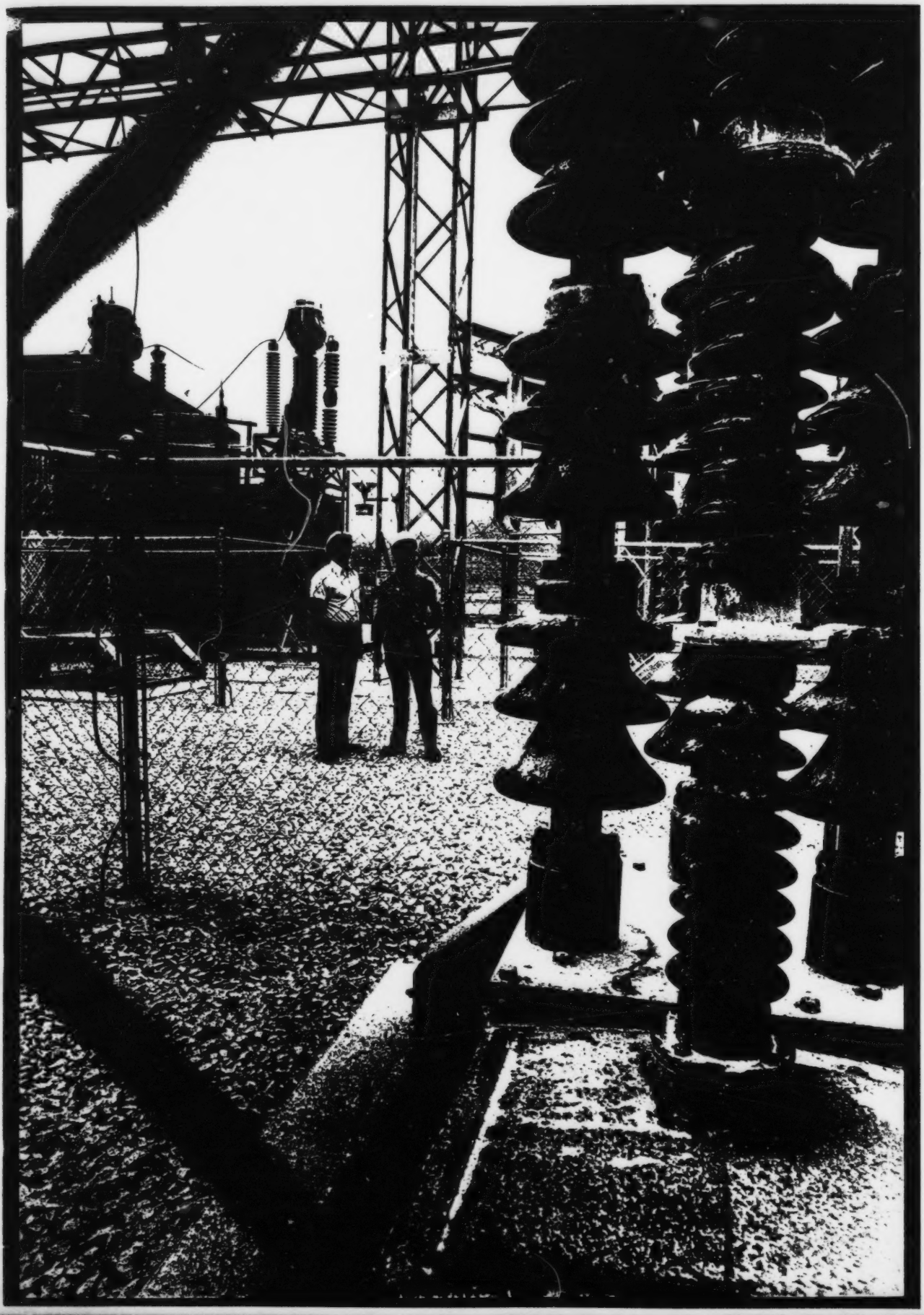
OPTIMIZING OUR OPERATIONS

Making the most of B.C. Hydro's existing facilities by participation in both the Power Smart and Resource Smart programs has been an important focus of the Production Group. The Power Smart philosophy of reducing electric consumption is being implemented at our plants, netting an annual savings of 12.4 gigawatt hours through the efficient use of station service supply – particularly in lighting – at five locations this year and next.

Several Resource Smart strategies were initiated including repairs at the



TOP LEFT: DON SWOBODA, VICE PRESIDENT OF PRODUCTION WITH POUL HANSON, PRESIDENT OF HIGHLAND VALLEY COPPER. ■ OPPOSITE: BY PROVIDING SERVICE IMPROVEMENTS AND TECHNICAL ADVICE, THE PRODUCTION GROUP IS HELPING ITS 85 INDUSTRIAL TRANSMISSION CUSTOMERS INCREASE PRODUCTIVITY. WORKING WITH CHARLES WEST, SENIOR ELECTRICIAN ENGINEER AT HIGHLAND VALLEY COPPER'S MINE IN KAMLOOPS IS AL MICHEL (RIGHT), SUB-FOREMAN, ELECTRICIAN FOR HYDRO.



Cheakamus generating station to increase efficiency; dredging Daisy Lake to increase usable water storage; and special operating arrangements at Revelstoke to permit tailrace dredging to proceed. With an increased net head, the Revelstoke plant will be able to produce more power from the same water resource.

MAJOR MAINTENANCE ACTIVITIES

A major renewal of our existing system is underway to ensure optimum efficiency in the 1990s.

On-schedule completion of major maintenance to the G.M. Shrum Generating Station's Unit 8 turbine and generator signalled the halfway point in an eight-year program to overhaul eight of the station's 10 turbines. At Mica Generating Station, temporary repairs were made to a turbine lower seal, although the unit will have to be completely disassembled in 1990 following a major upgrade to the powerhouse cranes. Multi-cone 500 kV insulators critical to the safety and security of the bulk power system are being replaced throughout the province, with 1827 insulators replaced in fiscal 1989 at a cost of $4.19 million.

PRODUCTION FACILITIES MANAGEMENT SYSTEM

Work continued on developing a computer-based Production Facilities Management System to better manage and maintain the thousands of components in the system. A System Disturbance Reporting module was implemented to record forced outage data and enable us to measure Production's impact on our ability to deliver power to the customer, and thereby develop measures to improve service.

BURRARD THERMAL GENERATING PLANT

Re-commissioning of the Burrard Thermal Generating Plant commenced during the fiscal year, with four of six units brought on stream and the balance readied for generation. This 912 megawatt natural gas-fired plant has been used principally for synchronous condenser operation, low reservoir generation or standby modes for many years, providing security of service for Lower Mainland customers.

During the year, tests were conducted to determine the potential for reducing nitrogen oxide emissions through combustion modification techniques. These emissions, already below applicable Federal and Provincial standards, were reduced a further 40 per cent through modified firing techniques. We are well on the way to the goal of making Burrard the cleanest thermal plant in North America.

CONTAMINATED OIL AND WASTE TREATMENT

B.C. Hydro continued with work to remove and destroy polychlorinated biphenyls (PCBs) from insulating oils used in electrical equipment. The Surrey Electric Shop processed an additional 1.2 million litres of oil containing low levels of PCBs, bringing the total to 1.7 million litres decontaminated at the end of March 1989. Contract decontamination service for our customers totalled 82 450 litres, with all costs recovered.

In addition, 49 PCB-filled surge capacitors were removed from service at 11 generating plants.

SUPPLY RELIABILITY

Energy not delivered from system generators in calendar 1988 was approximately 10 gigawatt hours, compared to almost 50 000 gigawatt hours of gross system generation. Of the total 18 597 customer outages in the year, only 46 or 0.24 per cent resulted from production problems. Major causes were weather (5200), birds (2500) and problems with trees (3500).

INDEPENDENT POWER PRODUCTION

We have issued several requests for private generation proposals, and others are planned. For example, increased power generation by industrial customers and more efficient electricity use in their plants creates "load displacement", which "releases" electricity for use by other customers and has the same effect as new generation projects. Current studies show private power producers could contribute some 1000 gigawatt hours per year by the mid-1990s.

Cogeneration, the simultaneous use of steam for industrial use and power production, provides another cost-effective power option, with current studies showing a potential of 1400 gigawatt hours per year.

PUBLIC SAFETY

Public education programs are an increasingly important part of ensuring safety when working with or around electricity.

From our successful "Electrical Safety for Emergency Personnel" program for Fire, Police and Ambulance personnel, we have developed "Electrical Safety for the Construction Industries". This program will be complemented with television safety spots targeted at the construction industry and residential weekend tree trimmers.

Helping Grades five and six students understand and respect the power on which we rely is the objective of "Be Electrically Alert", which last year involved 48 000 students or almost all elementary schools in the province.

In the coming year, we will introduce these youngsters to "Louie the Lightning Bug", our new public safety mascot.

These and other programs have contributed to a decrease in the yearly accident rate. However, a marked increase in motor vehicle accidents involving downed wires regrettably led to four fatalities.

	1987/88	1988/89
Total public accidents	245	216
Injury accidents	11	13
Fatal accidents	1	6
Accidents involving overhead lines	115	105
Tree felling / trimming accidents	108	89
Downed wires / motor vehicle accidents*	25	102

**Not included in Total Public Accidents figures*

EMPLOYEE SAFETY

An effective employee safety program is a reflection of both corporate responsibility and individual employee commitment.

Our objective is to keep disabling or time lost injuries to less than 10 incidents per million person-hours worked. Through the cooperation of all employees and a variety of initiatives, we have, for the first time, achieved our goal with an overall rate of 7.0 for 1989.

In comparison with other Canadian utilities, we are third behind Alberta Power and TransAlta. In addition, the Workers' Compensation Board has awarded us an assessment rate of 56 cents per $100 of payroll – among the lowest of major employers in British Columbia.

CUSTOMER SERVICE

POWER SMART

To conserve electricity and make better use of what we have, we have launched the Power Smart conservation program. This 10-year, $225 million energy efficiency initiative is expected to free up 2.4 billion kilowatt hours of electricity by 1998, almost four times the amount of power now consumed annually by the City of Victoria.

Designed for industrial, commercial and residential customer participation, Power Smart is one of the cheapest forms of energy available today. It is an environmentally-sensitive resource alternative that will allow us to lower the growth in demand for electricity, and therefore delay the need for new generating plants. Customers will benefit from reduced energy bills.

RESPONSE STANDARDS

In 1988/89, the Customer Service Group established response standards to measure the service we provide.

We have achieved our goal of completing 90 per cent of electric service orders within 10 working days of receipt of permit. On average, we are completing new electric service installations within six days and alterations within seven.

Our second goal is to respond to 90 per cent of safety-related trouble calls within one hour, and within two hours in other instances. Because Hydro crews are challenged by the great distances they must travel in the Northern Region, and this year in particular by the unusually cold and stormy weather in January and February, we handled 69 per cent of safety-related trouble calls within one hour, and 82 per cent of others within two hours.

Responding to 90 per cent of customer phone calls within 60 seconds is our third goal. Although we achieved only a 60 per cent response rate by March 31, 1989, we were expected to meet the 90 per cent within three or four months.

RELIABILITY

Reliability is measured annually by comparing Hydro's performance with other Canadian utilities and with previous years' achievements. Our goal is to ensure that the number of times our system is interrupted is less than half the national average.

For the last calendar year in which figures were available, our total System Average Interruption Frequency Index was 1.10, well below one half the reported Canadian average of 4.39.

For those experiencing a power outage, the average length was 2.6 hours, an improvement over the previous year's 2.65 hours but still above the national average of 1.49 hours.

The Canadian Index of Reliability is based on the percentage of annual customer service hours that electric service is available (ASAI). In the 1988 calendar year, our electric service was available 99.975 per cent of the time, compared to a national average of 99.925.

TOP LEFT: JOHN SHEEHAN, VICE PRESIDENT OF CUSTOMER SERVICE WITH JOHN ROSS, SENIOR VICE PRESIDENT, B.C. OPERATIONS, MACMILLAN BLOEDEL LIMITED. HIGH ENERGY EFFICIENCY MOTORS INSTALLED THROUGHOUT THE PROVINCE HAVE EARNED THE FOREST COMPANY B.C. HYDRO REBATES TOTALLING $55,265. ■ OPPOSITE: EXPERIMENTAL HIGH-PRESSURE SODIUM LIGHTING IS INCREASING PRODUCTION OF FREESIA AND ALSTROEMERIA CROPS AT FAIRFIELD PROPOGATORS IN CHILLIWACK. OWNER/MANAGER JOHN SOMMERS (LEFT) IS ONE OF B.C.'S

OUR CUSTOMERS

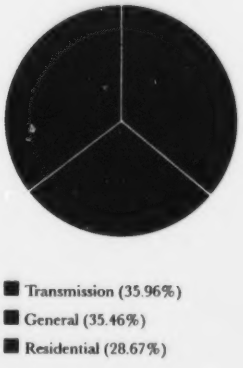
Industrial Transmission Customers

There has been a steady growth in service to large industrial transmission customers, which include pulp and paper, forestry, mining and manufacturing.

Our largest industrial user category is pulp and paper manufacturing, now purchasing 44 per cent of all industrial sales and expected to increase to 50 per cent by 1998/99.

Our large industrial accounts include 85 customers worth $397 million in fiscal 1989, and represent 36 per cent of the total domestic load.

Domestic Sales by Customer Class
(1989 volumes)



General and Commercial Accounts

Service industries, municipalities, governments and small and large businesses all share in the growth of General and Commercial Accounts, which now represent 32.7 per cent of our total domestic load and 34.8 per cent or $579 million of revenues.

Contributing to this are secondary industries such as B.C.'s developing greenhouse industry including 130 vegetable and 180 ornamental growers with a 1988 farm gate value of $77 million.

B.C. Hydro is working with the growers by providing technical advice on equipment selection and lighting system installation, and by instigating and assisting with field trials and projects to demonstrate the economic feasibility of lighting-assisted production. Production has doubled since 1985, and is expected to grow at an annual rate of seven to 10 per cent in the next three to five years.

Domestic Sales by Customer Class
(1989 revenues)

Residential Customers

Our residential load increased an average of two per cent per year in the last six years, and represents 28.6 per cent of our total domestic load. Revenues were $588 million in fiscal 1989, up seven per cent over last year.

During 1988, 6083 electric meters were installed in Fraser Valley West, which would indicate a population growth of 21 000 people. When compared to the town of Merritt with a total of 5791 accounts, this is similar to adding a small city to the system.

In addition to meeting load growth, we have implemented a Vegetation Management program to balance public safety and system reliability needs with environmental concerns.

Beginning in Vancouver and working with municipal parks boards and engineering departments, we have developed tree pruning specifications to remove growth conflicting with our powerlines and encourage regrowth away from the lines, while striving to maintain the natural shape of the trees.

HUMAN RESOURCES

Hydro employees share climate goals of integrity, commitment, teamwork and innovation which create a working environment supporting our mission and objectives and offering the opportunity to excel to all.

In order to be closer to our customers, we are committed to organizational decentralization and are moving towards greater employee autonomy and empowerment. Our initiatives address a renewed approach to Managing Smarter and Working Smarter, and emphasize professional development and skill enhancement for employees at all levels. Our goal is a multi-skilled, highly motivated, mobile workforce.

EMPLOYMENT AND HUMAN RESOURCES PLANNING

A five year Human Resource forecast identified an aging workforce, in which nearly two thirds of all employees are over the age of 40, as a primary concern. A task force has been formed to develop plans to ensure the knowledge and experience of the current workforce is transferred to the next generation of employees, and to ensure the Hydro of the future meets customers' changing needs.

The task force will also address the need for greater employment equity, productivity improvements obtained through technology as well as employee involvement, and ways in which employees and their activities may better reflect society's growing concern for the environment.

TRAINING AND DEVELOPMENT

The need for a highly skilled and flexible workforce is being met with a range of employee training and development programs.

While emphasizing trades, apprenticeship and technical programs, we are expanding all training opportunities and increasing financial reimbursement levels.

To meet the objective of an average five days training per employee, the annual training budget is being increased from two to six per cent of total employee compensation.

IDEA PROGRAM

More than 1700 suggestions were received in the first year of IDEA, a program rewarding employees for suggestions that improve Hydro operations and create savings for customers.

Already ranked third among 42 North American public utilities based on the number of suggestions received per 100 employees, IDEA has made 345 cash awards for suggestions saving $385,000 in the first year and projected to save $508,000 in the long term.

TOP LEFT: EINAR FIELD, VICE PRESIDENT OF HUMAN RESOURCES WITH BOB JOHNSON OF TRENDSITIONS STRATEGY MANAGEMENT, INC. ■ OPPOSITE: RECENT U.B.C. GRADUATE JIM SMITH IS PART OF THE NEW GRADUATE ENGINEERS-IN-TRAINING PROGRAM THAT PROVIDES 30 MONTHS' EXPERIENCE IN HYDRO'S PRODUCTION, SYSTEM DEVELOPMENT AND CUSTOMER SERVICE OPERATING GROUPS. POTENTIAL TRAINEES ARE RECRUITED BY TAZEEM NATHOO, MANAGER OF EMPLOYMENT AND HUMAN RESOURCES PLANNING.

EMPLOYMENT SECURITY

Hydro, like any responsible company, must change and evolve in response to changing markets, technology and customer needs. Base staffing levels are being established with temporary employees and purchased services to be used to meet demands generated by economic upturns.

If economic downturns result in job losses, affected employees will be offered alternate job opportunities without loss of salary and benefits. This represents a two-way commitment, with employees expected to be flexible and open to retraining and/or relocation. Our commitment to employees, together with their commitment to flexibility and to our changing needs, equals employment security, and with it the ability to continue to serve our customers as efficiently and effectively as possible.

COMPENSATION LEVELS SURVEY

B.C. Hydro measures its objective of providing employees with a level of pay or compensation comparable to major private sector employers in B.C. with an annual Total Compensation Survey. The 1988/89 survey results show that, compared to a community average of 1.00, the average total cash paid all Hydro employee groups was 1.01, and the average total compensation was 1.05.

FINANCE AND ADMINISTRATION

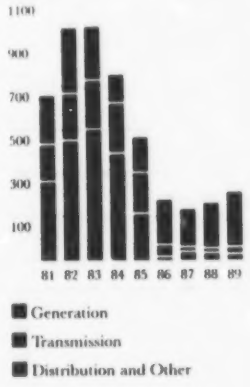
B.C. Hydro is a significant contributor to the provincial economy through electricity pricing, purchasing of goods and services, exporting of power, as a major employer and by making significant contributions to Provincial and local revenues. Other major economic spin-offs are created through capital expenditures to maintain and enhance the reliability of our electrical system.

INVESTMENT IN BRITISH COLUMBIA

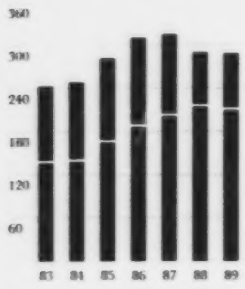
Increased domestic power requirements and our commitment to maximizing system efficiency led to an increase in our capital, materials and services expenditures. These have risen from $219 million in fiscal 1988 to $298 million in 1989. We expect expenditures of almost $1.5 billion in these areas over the next three years.

We are also actively managing our assets by optimizing their use, restructuring our operations and reviewing non-essential items. This has resulted in surplus property sales which reduce our carrying costs, realize capital gains and stimulate the economy. During fiscal 1989 we sold $33 million in surplus

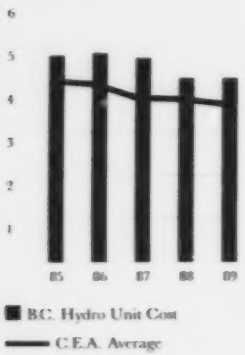
Capital Expenditures
Electric Service
(in millions of dollars)



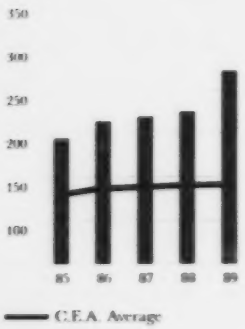
Payments to the Province of B.C.
(in millions of dollars)



Total Cost of Domestic Power
(cents per domestic kWh)



Customers per Regular Employee



PURCHASING IN BRITISH COLUMBIA

B.C. Hydro supports British Columbia's economic development by working with local suppliers and manufacturers to maximize our purchases in this province.

During fiscal 1989, more than 250 suppliers were assisted by our Supplier Development Department. Another 8000 people attended the opportunity conferences and purchasing outlook seminars we hosted in a dozen communities throughout British Columbia. The result was more than $10 million of new business for B.C. which would otherwise have left the province.

GOVERNMENT REVENUES

B.C. Hydro is also a major contributor to Provincial and local government revenues. In 1989, we contributed $211 million in water rentals to the Province. Over the last five years the total water rentals were $1,010 million, or 12.3 per cent of our revenues from the same period. School taxes and grants-in-lieu of property taxes paid in the last fiscal year were $80 million and totalled $493 million over the last five years.

We also pay significant amounts of sales taxes and employee-related taxes, and collect sales and other taxes on behalf of other government agencies.

EFFICIENT UTILITY: MEASURING OUR UNIT COSTS

The "bottom-line" measure of B.C. Hydro's efficiency is the cost of producing electricity, including operating expenses, finance charges and the cost of energy. It now costs us 4.4 cents to generate, transmit and distribute one kilowatt hour of electricity compared to a Canadian Electrical Association (C.E.A.) average of 4.0 cents.

Our unit costs for operating expenses are 36 per cent below the C.E.A. average and are among the lowest in Canada. This reflects the nature of our power resources and our continuing commitment to the efficient supply of that power.

PRODUCTIVITY

Our operating efficiency is reflected in the number of residential customers we serve per regular employee, which in 1989 was 274, compared to 249 in 1988 and to a C.E.A. average of 141 for both years.

On the production side, we generated 9.1 million kilowatts per hour per employee in 1989, compared with 5.4 million for the C.E.A.

TOP LEFT: FRANK KLASSEN, VICE PRESIDENT OF FINANCE AND ADMINISTRATION WITH GEOFF DAY, SENIOR VICE PRESIDENT, BANK OF MONTREAL. • OPPOSITE: B.C. HYDRO CONTRIBUTES TO LOCAL ECONOMIES THROUGHOUT BRITISH COLUMBIA THROUGH THE PAYMENT OF SCHOOL AND OTHER TAXES. REVIEWING THE VALUE OF ASSESSED TAXES IS HYDRO'S PROPERTY TAX SUPERVISOR ORVAL WRIGHT (LEFT) WITH DAVE LEE, DEPUTY ASSESSOR AND JIM LOUIE, APPRAISER (RIGHT), BOTH OF THE B.C. ASSESSMENT AUTHORITY.

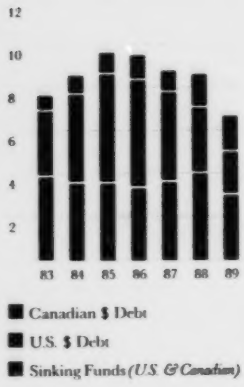
DEBT REDUCTION

After peaking at $8.6 billion in 1985, long-term debt has been reduced to $6.8 billion. Most of this has been achieved in the last two years, with the level of debt lowered by $900 million in 1989 alone. This reduction was accomplished by using positive cash flow from operations, proceeds from the sale of the Gas and Rail businesses and other properties, and improvement in the Canadian dollar.

To put the $6.8 billion debt into perspective, it supports assets with a replacement value of over $18 billion.

We have concentrated on using available funds to reduce our U.S. dollar debt in order to minimize exposure to foreign currency risk. U.S. debt has been lowered by almost one billion U.S. dollars from last year, cutting U.S. debt from 47 per cent of total debt in 1988 to 34 per cent in 1989. We are also reducing our exposure using forward exchange contracts. As at March 31, 1989 a further $312 million of U.S. debt was hedged in this manner, as was a significant portion of U.S. dollar interest payment requirements for 1990. We also increased the use of short-term borrowings as part of our debt management strategy to avoid locking-in to high long-term debt interest rates. Besides maintaining financing flexibility while managing interest rates to minimize costs, we are now positioned to take advantage of expected lower long-term interest rates over the next year.

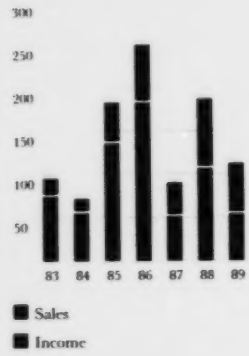
Long Term Debt Including Sinking Funds
(in billions of dollars)



EXPORT SALES

In 1989 we were able to maximize revenues by obtaining average export sales unit prices 28 per cent higher than in the previous year. Total export revenue for the year was $109 million, down from $184 million in fiscal 1988, but similar to the level recorded in 1987.

Export Sales
(in millions of dollars)



SALE OF BUSINESSES

The sale of the Gas and Rail operations has allowed the company to focus on its electric business. To provide a smooth transition we continue to provide certain services to independent operations that were once integrated with B.C. Hydro, some of which run through to 1991.

Proceeds from Sale of Businesses

SUBSIDIARIES

B.C. HYDRO INTERNATIONAL LIMITED (BCHIL)

The technical expertise of B.C. Hydro employees in engineering and utility operation is available to both the private and public sectors through B.C. Hydro International Ltd.

Over the last few years, BCHIL has established a reputation as a partner to British Columbian consultants, supporting their proposals and initiatives to carry out projects in Canada and internationally. These include contracts in Canada, China, Venezuela and Brazil.

Major projects underway are the Canadian International Development Agency – China project where BCHIL and other Canadian utilities are providing training and technical assistance to Chinese agencies, and providing and installing air gap monitoring equipment designed and developed by Hydro for Venezuela's Guri hydroelectric project.

We are also providing technical assistance to Alcan's Kemano Completion project and earthquake analysis of the Greater Vancouver Regional District's Cleveland and Seymour Falls Dams as a subconsultant to Klohn-Crippen Consultants Ltd.

BRITISH COLUMBIA POWER EXPORT CORPORATION (POWEREX)

As a result of a provincial government initiative POWEREX was established as "single window" agency to market B.C.'s firm electricity exports. POWEREX will negotiate and administer firm export sales agreements with U.S. utilities and purchase agreements with electricity producers, and will make arrangements with Hydro for services such as transmission facilities.

In December 1988 POWEREX called for Expressions of Interest from independent power producers to develop generation projects for U.S. export markets. Thirteen companies with head offices in Canada, United States and Japan responded with proposed projects totalling about 4000 megawatts of capacity.

POWERTECH LABS INC.

On January 1, 1989, the business of Hydro's Research and Development Division was transferred to the newly-formed subsidiary, Powertech Labs Inc. Hydro has contracted with Powertech to provide research, testing and consulting work for a 10 year period.

Powertech was formed with the intention of transforming the operation into a dynamic, forward-thinking business venture, generating profits for the

parent company. This is to be done by marketing Powertech's sophisticated testing facilities and the services of its internationally-renowned experts to the commercial sector.

WESTECH INFORMATION SYSTEMS INC.

Westech Information Systems Inc. is one of two subsidiaries created in February 1989 from Hydro's Computer and Management Systems Division. It offers a wide range of professional services including the design, development and maintenance of integrated computer systems. Westech is the seventh largest company of its kind in the Canadian market with projected 1989/90 revenues of $17 million.

Westech will service Hydro on a five-year contract basis, as well as pursue new business opportunities with medium to large businesses in the utility, government and private sectors throughout North America.

WESTERN INTEGRATED TECHNOLOGIES INC.

The other subsidiary created from the Computer and Management Systems was Western Integrated Technologies Inc. Specializing in technical support and the operation of data processing environments, Western manages approximately $25 million worth of state-of-the-art equipment and technology. Its initial emphasis will be on mainframe computer systems and data communications networks.

One of the 10 leading information processing companies in Canada with projected 1989/90 revenues of $32 million, Western will meet, on a five-year contract basis, the commercial processing requirements of Hydro, its subsidiaries, and Vancouver Island Gas.

FINANCIAL STATISTICS

for the years ended March 31

	1989	1988	1987
		(in millions)	
REVENUE	$ 1,769	$ 1,718	$ 1,579
Cost of energy	264	274	238
GROSS MARGIN	1,505	1,444	1,341
EXPENSES:			
Employee compensation	173	195	164
Materials and services	88	56	55
Taxes	80	74	110
Depreciation	225	218	214
Finance charges	872	827	854
	1,438	1,370	1,397
OPERATING INCOME (LOSS)	67	74	(56)
Net rate stabilization transfers	15	(38)	107
Income (loss) from discontinued operations[1]	4	19	16
Extraordinary items	—	—	(42)
NET INCOME (LOSS)	$ 86	$ 55	$ 25
Domestic	$ 10	$ (36)	$ (112)
Export (stabilized)	72	72	163
Discontinued operations	4	19	16
Extraordinary items	—	—	(42)
NET INCOME (LOSS)	$ 86	$ 55	$ 25
FIXED ASSETS[2]			
In service, at cost	$ 10,765	$ 11,044	$ 10,936
Accumulated depreciation	2,520	2,440	2,228
	$ 8,245	$ 8,604	$ 8,708
Fixed asset expenditures	$ 210	$ 195	$ 187
Contributions in aid of construction	25	30	27
Net fixed asset expenditures	$ 185	$ 165	$ 160
DEBT[3]	$ 6,774	$ 7,682	$ 8,021
EMPLOYEES AT YEAR-END[4]			
Regular	4,510	4,851	5,003
Temporary	677	527	378
	5,187	5,378	5,381

[1] *1979 to 1989 includes income from the Gas and Rail businesses on a net basis. 1980 and 1979 include losses on transit operations.*

[2] *1979 to 1988 includes assets from the Gas and Rail businesses.*

[3] *Restated to conform with 1989 financial presentation. Includes long-term debt, short-term borrowings and long-term debt due within one year.*

[4] *Excludes Gas, Rail and transit operations employees.*

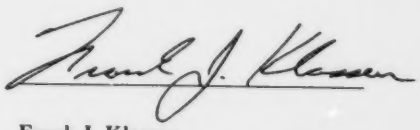
1986	1985	1984	1983	1982	1981	1980	1979
$ 1,647	$ 1,513	$ 1,230	$ 1,174	$ 1,130	$ 887	$ 720	$ 672
245	211	172	170	118	29	29	20
1,402	1,302	1,058	1,004	1,012	858	691	652
180	209	169	164	153	128	112	102
56	54	53	53	56	37	34	34
112	117	108	103	88	84	66	61
198	215	224	165	140	125	109	99
874	739	480	442	378	375	286	260
1,420	1,334	1,034	927	815	749	607	556
(18)	(32)	24	77	197	109	84	96
(4)	(8)	14	(19)	(90)	—	—	—
31	25	13	—	13	4	(44)	(47)
—	—	—	(77)	—	—	(38)	—
$ 9	$ (15)	$ 51	$ (19)	$ 120	$ 113	$ 2	$ 49
$ (200)	$ (171)	$ (39)	$ (2)	$ (1)	$ 109	$ 84	$ 96
178	131	77	60	108	—	—	—
31	25	13	—	13	4	(44)	(47)
—	—	—	(77)	—	—	(38)	—
$ 9	$ (15)	$ 51	$ (19)	$ 120	$ 113	$ 2	$ 49
$ 10,749	$ 10,231	$ 8,046	$ 7,566	$ 7,192	$ 6,691	$ 5,991	$ 5,339
2,037	1,824	1,660	1,499	1,345	1,199	1,063	980
$ 8,712	$ 8,407	$ 6,386	$ 6,067	$ 5,847	$ 5,492	$ 4,928	$ 4,359
$ 224	$ 484	$ 820	$ 1,037	$ 1,053	$ 740	$ 755	$ 722
34	31	30	65	37	32	25	19
$ 190	$ 453	$ 790	$ 972	$ 1,016	$ 708	$ 730	$ 703
$ 8,490	$ 8,569	$ 7,576	$ 7,064	$ 6,602	$ 5,516	$ 5,296	$ 4,838
5,179	5,729	6,643	7,067	7,431	7,227	7,301	7,268
323	358	420	420	1,076	978	826	886
5,502	6,087	7,063	7,487	8,507	8,205	8,127	8,154

MANAGEMENT REPORT

The financial statements of B.C. Hydro have been prepared by management in accordance with accounting principles generally accepted in Canada, consistently applied and appropriate in the circumstances. Because a precise determination of many assets and liabilities is dependent upon future events, the preparation of periodic financial statements necessarily involves the use of estimates and approximations which have been made using careful judgement. The financial statements have, in management's opinion, been properly prepared within reasonable limits of materiality and within the framework of the accounting policies summarized in the notes to the financial statements. The financial statements have also been reviewed by the Audit Committee and approved by the Board of Directors. Financial information presented elsewhere in this Annual Report is consistent with that in the financial statements.

Management depends upon a system of internal controls in order to provide reasonable assurance, on a cost-effective basis, that financial information is reliable and accurate. This system includes formal written policies and procedures, the careful selection and training of qualified personnel, and an organizational structure that provides for the appropriate delegation of authority and segregation of responsibilities. This system is monitored through the performance of a comprehensive internal audit program. Our external auditors also independently perform such tests of the system of internal controls as they consider necessary for the purpose of expressing their opinion on the financial statements. The Audit Committee, which is comprised of directors who are not employees, meets regularly with representatives of the external auditors, the internal auditors and management in order to satisfy themselves that B.C. Hydro's system of internal controls is functioning properly.

L.I. (Larry) Bell
Chairman



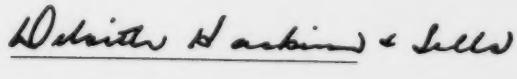
Frank J. Klassen
Vice-President, Finance and Administration

REPORT OF THE AUDITORS

The Lieutenant-Governor in Council, Province of British Columbia:

We have examined the consolidated balance sheet of British Columbia Hydro and Power Authority as at March 31, 1989 and the consolidated statements of operations, retained earnings and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of British Columbia Hydro and Power Authority as at March 31, 1989 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.



Chartered Accountants
Vancouver, British Columbia
May 26, 1989

CONSOLIDATED STATEMENT OF OPERATIONS

for the years ended March 31

	1989			1988		
	Domestic	Export	Total	Domestic	Export	Total
	(in millions)					
REVENUES (Note 2)						
Residential	$ 588	$ —	$ 588	$ 548	$ —	$ 548
General	579	—	579	547	—	547
Transmission	397	—	397	373	—	373
Other	96	109	205	66	184	250
	1,660	109	1,769	1,534	184	1,718
Cost of Energy (Note 3)	212	52	264	200	74	274
GROSS MARGIN	1,448	57	1,505	1,334	110	1,444
EXPENSES						
Employee compensation (Note 4)	173	—	173	195	—	195
Materials and services	88	—	88	56	—	56
Taxes	80	—	80	74	—	74
Depreciation	225	—	225	218	—	218
	566	—	566	543	—	543
OPERATING INCOME BEFORE FINANCE CHARGES	882	57	939	791	110	901
Finance charges (Note 5)	872	—	872	827	—	827
OPERATING INCOME (LOSS)	10	57	67	(36)	110	74
Net rate stabilization transfers (Note 6)	—	15	15	—	(38)	(38)
INCOME (LOSS):						
From continuing operations	$ 10	$ 72	82	$ (36)	$ 72	36
From discontinued operations (Note 7)			4			19
NET INCOME			$ 86			$ 55

Certain 1988 figures have been restated to conform with the presentation used for 1989 (Note 7).

CONSOLIDATED STATEMENT OF RETAINED EARNINGS

for the years ended March 31

	1989	1988
	(in millions)	
Balance at beginning of year	$ 595	$ 540
Net income	86	55
Balance at end of year	$ 681	$ 595

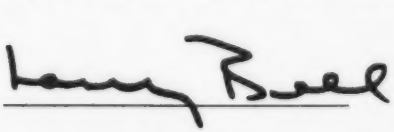
CONSOLIDATED BALANCE SHEET

for the years ended March 31

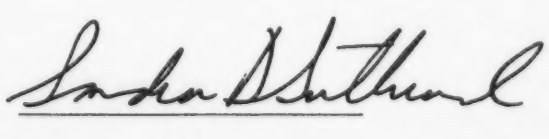
	1989	1988
	(in millions)	
FIXED ASSETS (Note 8)		
Fixed assets in service	$ 10,608	$ 10,428
Less accumulated depreciation	2,520	2,289
	8,088	8,139
Unfinished construction	157	154
	8,245	8,293
CURRENT ASSETS		
Temporary investments	71	97
Accounts receivable and unbilled revenues	314	224
Materials and supplies	40	36
Prepaid expenses	47	22
Property held for sale	25	35
	497	414
DEFERRED CHARGES		
Foreign currency translation	114	238
Debt discount and issue costs	42	52
	156	290
NET ASSETS OF DISCONTINUED OPERATIONS	—	461
	$ 8,898	$ 9,458
LONG-TERM DEBT (Note 9)	$ 6,774	$ 7,682
CURRENT LIABILITIES		
Accounts payable	183	158
Accrued interest	290	303
	473	461
DEFERRED CREDITS		
Rate stabilization account (Note 6)	23	38
Deferred revenue	34	21
Contributions arising from the Columbia River Treaty	332	341
Contributions in aid of construction	346	320
	735	720
PREFERRED FUNDING (Note 10)	235	—
RETAINED EARNINGS	681	595
	$ 8,898	$ 9,458

Certain 1988 figures have been restated to conform with the presentation used for 1989 (Note 7).

APPROVED ON BEHALF OF THE BOARD:



L.I. (Larry) Bell, *Chairman*



Sandra D. Sutherland, Q.C., *Director*

CONSOLIDATED STATEMENT OF CHANGES IN FINANCIAL POSITION

for the years ended March 31

	1989	1988
	(in millions)	
OPERATING ACTIVITIES		
Operating income	$ 67	$ 74
Depreciation	225	218
Other non-cash items including working capital changes	(40)	31
Funds provided by continuing operations	252	323
Funds provided by discontinued operations	14	18
Funds provided by operating activities	266	341
INVESTING ACTIVITIES		
Fixed asset expenditures	(210)	(163)
Contributions in aid of construction	25	30
Net proceeds from property sales	33	8
Funds used for investing activities	(152)	(125)
FINANCING ACTIVITIES		
Revolving borrowings	845	496
Preferred funding	235	—
Bonds, notes and debentures		
- issued	94	9
- retired, including sinking fund changes	(1,507)	(648)
Funds used for financing activities	(333)	(143)
SALE OF BUSINESSES		
Proceeds from sale of Gas and Rail Services	787	—
Payment to the Province	(220)	—
Pension plan payments (Note 11)	(50)	—
Costs related to sale of businesses	(24)	—
Debenture from B.C. Gas Inc.	(300)	—
Funds provided by sale of businesses	193	—
INCREASE (DECREASE) IN FUNDS	(26)	73
FUNDS AT BEGINNING OF YEAR	97	24
FUNDS AT END OF YEAR	$ 71	$ 97

Funds at beginning and end of year consist of temporary investments.

Certain 1988 figures have been restated to conform with the presentation used for 1989 (Note 7).

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(tabular amounts expressed in millions of dollars unless otherwise stated)

NOTE 1 SIGNIFICANT ACCOUNTING POLICIES

British Columbia Hydro and Power Authority ("B.C. Hydro") is a Crown corporation of the Province of British Columbia (the "Province"). B.C. Hydro is regulated by the British Columbia Utilities Commission (the "Commission"). The accounting policies of B.C. Hydro conform to accounting principles generally accepted in Canada. A description of the significant accounting policies follows. See Note 6 for an explanation of the Rate Stabilization Account.

CONSOLIDATION

The consolidated financial statements include the financial statements of B.C. Hydro and all of its subsidiary companies. Principal subsidiaries of the company, all of which are wholly-owned, are Powertech Laboratories Inc., Western Integrated Technologies Inc., Westech Information Systems Inc., British Columbia Power Export Corporation, B.C. Hydro International Limited and Columbia Estates Company, Limited.

REVENUES

Domestic revenues represent sales of energy to customers within the Province and sales of firm energy to those outside the Province (mainly Seattle and Point Roberts, Washington and Hyder, Alaska) with whom B.C. Hydro has long-term commitments.

Export revenues are derived from energy sales made outside the Province other than those classified as domestic. These sales are surplus to B.C. Hydro's domestic energy requirements.

Customers are billed on a cyclical basis for energy deliveries with unbilled deliveries being accrued and included in revenues.

FIXED ASSETS

Fixed assets in service consist principally of land, water rights, storage dams and plant for the generation, transmission and distribution of electricity, and include the cost of plant financed by contributions in aid of construction and contributions arising from the Columbia River Treaty.

Fixed assets are carried at cost which includes materials, direct labour and appropriate portions of engineering, administration and finance charges.

The costs of any capital development studies which are deferred for more than one year are amortized on a straight-line basis at 20% per annum during the deferral period. Capital projects which are deferred, but for which there is a reasonable probability of proceeding, have a provision made for any reduction in the value of project costs. The costs of capital development studies and capital projects which are abandoned or subject to indefinite deferral are written off.

DEPRECIATION

Depreciation is provided on all depreciable assets in service as at the beginning of each year based on the average service life of the assets and is computed using the straight-line method.

FINANCE CHARGES CAPITALIZED

B.C. Hydro capitalizes finance charges at rates equivalent to the cost of borrowing those funds expended on construction projects during each year of construction.

TEMPORARY INVESTMENTS

Temporary investments are valued at the lower of cost and market.

MATERIALS AND SUPPLIES

Materials and supplies are valued at average cost, less provisions for decline in value.

PROPERTY HELD FOR SALE

Property held for sale is valued at the lower of cost and net estimated realizable value.

FOREIGN CURRENCY TRANSLATION

Long-term debt, sinking funds, current assets and current liabilities denominated in a foreign currency are translated into Canadian currency at the rate of exchange prevailing at the balance sheet date. U. S. currency liabilities which are hedged are converted at the rate established by the terms of the hedge instrument.

Unrealized gains and losses arising from the translation of long-term debt and sinking funds are deferred and amortized over the remaining term of the debt. The annual amortization is determined by dividing the unamortized balance of the gains and losses by the sum of the remaining years, except that for the last four years the unamortized balance is written off on a straight-line basis. Foreign exchange gains and losses on current assets and current liabilities are included in income.

DEBT DISCOUNT AND ISSUE COSTS

Discount and issue costs on long-term debt are amortized on a straight-line basis over the term of the respective debt.

DEFERRED REVENUE

Deferred revenue consists primarily of amounts received under the Skagit River Agreements. These amounts are deferred and included in income on an annuity basis over the energy delivery period ending in fiscal 2066.

CONTRIBUTIONS

Contributions in aid of construction are amounts received from certain customers toward the costs of the extension of services. These amounts are amortized over the estimated service lives of the related assets at an amount equal to the corresponding annual provision for depreciation. Contributions received in respect of unfinished construction are not amortized until the assets are placed in service.

Contributions arising from the Columbia River Treaty are amortized over the period ending in fiscal 2025, the minimum term of the Treaty, at an amount equal to the corresponding annual provision for depreciation of the related assets.

PENSION COSTS

The costs of pension benefits for employee services for the year, determined on an actuarial basis in accordance with the terms of the pension plan agreement, are included in pension expense. Pension expense also includes amortization of the initial net pension surplus, the cost of past service benefits and experience gains and losses. Amortization is on a straight-line basis over the expected average remaining service life of pension plan members. Pension fund investments are valued at a five-year average of market-related value.

NOTE 2 RATE ADJUSTMENTS

There have been no increases to domestic electricity rates since April 1, 1986.

NOTE 3 COST OF ENERGY

	1989			1988		
	Domestic	Export	Total	Domestic	Export	Total
	(in millions)					
Water rentals	$ 197	$ 14	$ 211	$ 188	$ 33	$ 221
Fuel for generation	12	11	23	9	—	9
Purchase of electricity	2	19	21	2	21	23
Transmission charges	1	8	9	1	20	21
	$ 212	$ 52	$ 264	$ 200	$ 74	$ 274

Water rentals are amounts paid to the Province on the use of water in hydro-electric generation. Fuel for generation includes natural gas for the Burrard Thermal Generating Plant and fuel for service areas which are not part of the integrated system. Purchases of electricity are from other utilities and independent power producers. Transmission charges are paid to other utilities for the use of their transmission lines.

NOTE 4 EARLY RETIREMENT INCENTIVE PROGRAM

In fiscal 1988 B.C. Hydro offered an early retirement incentive program to all employees meeting certain criteria of age and service. As a result, employee compensation for 1988 includes amounts for lump sum payments to retirees, payments to the pension plan for waivers of pension reductions normally arising on early retirement and estimated future indexing of these pension waivers.

NOTE 5 FINANCE CHARGES

	1989	1988
	(in millions)	
Interest on bonds, notes and debentures	$ 827	$ 954
Interest on revolving borrowing facility	109	15
Amortization of deferred charges:		
Foreign exchange gains and losses	9	10
Debt discount and issue costs	7	14
Loss (gain) on extinguished debt (Note 9)	80	(18)
Other	6	2
	1,038	977
Less:		
Income from sinking fund investments	113	98
Income from temporary investments	7	1
Income from term debenture	27	—
Allocated to discontinued operations	15	48
	162	147
	876	830
Less:		
Finance charges capitalized	4	3
	$ 872	$ 827

The effective rate for finance charges capitalized to unfinished construction for fiscal 1989 was 10.0% (1988 – 9.2%).

NOTE 6 RATE STABILIZATION ACCOUNT

The Commission directed B.C. Hydro to create, as of March 31, 1982, an account to be known as the rate stabilization account derived from export sales of surplus electric energy (exclusive of sales made under certain export contracts) less associated direct expenses. Directives from the Commission over the past two years have resulted in the following transfers to and from the account:

	1989	1988
Balance at beginning of the year	$ 38	$ —
Transfer from income to the account	57	110
Transfer from the account to income	(72)	(72)
Net rate stabilization transfers	(15)	38
Balance at end of the year	$ 23	$ 38

TRANSFERS TO THE ACCOUNT

All revenues from export sales, less associated direct expenses, were transferred to the account.

TRANSFERS FROM THE ACCOUNT

Transfers from the account to income were limited to:

1989 – an amount of $72 million.

1988 – revenues from the first $116 million of export sales, less associated direct expenses.

NOTE 7 SALE OF BUSINESSES

During the year B.C. Hydro sold its non-electric businesses to the private sector: the Mainland Gas Service on July 16, 1988, the Rail Service on August 31, 1988 and the Victoria Gas Service on February 28, 1989. The Mainland Gas Service was sold for $741 million and the Rail Service for $38 million. The agreement for the sale of the Victoria Gas Service was for $17 million, of which $11 million is conditional upon the delivery of natural gas to Victoria, British Columbia, prior to January 1, 2002.

The net book value of the fixed assets of the businesses sold was $474 million. After deducting amounts for costs, adjustments and a provision for pension payments associated with the sales, an amount representing the net gain of $220 million was paid to the Province pursuant to the requirements of the Hydro and Power Authority Privatization Act.

Income from discontinued operations of $4 million for these services for the respective periods to the dates of sale, as noted above, is shown on a net basis in the consolidated statement of operations. The operating results for the year ended March 31, 1988 have also been restated on a net basis. Revenues from the discontinued operations were $392 million for the year ended March 31, 1988 while expenses for the same period were $373 million. Revenues and expenses for the period to the respective dates of sale in fiscal 1989 have not been provided as they are not considered to provide meaningful information.

NOTE 8 FIXED ASSETS

As at March 31

	1989						1988	
	Fixed Assets in Service			Unfinished Construction*	Total Net Book Value	Composite Depreciation Rate (%)	Total Net Book Value	Composite Depreciation Rate (%)
	Original Cost	Accumulated Depreciation	Net Book Value					
Generation and storage	$ 4,991	$ 897	$ 4,094	$ 88	$ 4,182	1.57	$ 4,275	1.57
Transmission	2,295	518	1,777	17	1,794	2.40	1,827	2.41
Transformation	1,291	377	914	15	929	2.93	937	2.94
Distribution	1,520	520	1,000	27	1,027	3.82	976	3.81
Buildings, furniture and equipment	324	134	190	6	196	4.86	154	4.39
Other properties	91	26	65	—	65	9.21	72	6.32
Service vehicles	56	41	15	—	15	8.50	17	8.59
Research and development	40	7	33	4	37	3.70	35	4.05
TOTAL	$ 10,608	$ 2,520	$ 8,088	$ 157	$ 8,245		$ 8,293	

* Unfinished construction includes $84 million (1988 – $92 million) in deferred capital project costs mainly relating to the Peace Site C and Murphy-Keenleyside deferred capital projects.

NOTE 9 LONG-TERM DEBT

As at March 31	1989					1988				
	U.S.	(*)	Cdn.	(*)	Total	U.S.	(*)	Cdn.	(*)	Total
Maturing in:										
1989	$ —		$ —		$ —	$ 427	(13.4)	$ 166	(7.8)	$ 593
1990	256	(14.6)	290	(10.3)	546	294	(14.0)	290	(10.3)	584
1991	—		111	(7.8)	111	36	(9.5)	111	(7.8)	147
1992	95	(5.8)	249	(7.1)	344	127	(6.8)	249	(7.1)	376
1993	249	(13.0)	164	(6.9)	413	281	(12.6)	164	(6.9)	445
1994	—		177	(7.1)	177	—		—		—
1—5 years	600	(12.5)	991	(8.1)	1,591	1,165	(12.5)	980	(8.1)	2,145
6–10 years	—		786	(8.5)	786	499	(10.4)	791	(8.2)	1,290
11–15 years	119	(10.3)	1,350	(9.9)	1,469	124	(10.3)	1,121	(9.7)	1,245
16–20 years	627	(8.8)	793	(11.7)	1,420	649	(8.8)	1,099	(11.2)	1,748
21–25 years	1,491	(14.3)	150	(13.5)	1,641	1,547	(14.3)	151	(13.5)	1,698
Bonds, notes and debentures	2,837 ($2,355 U.S.)	(12.6)	4,070	(9.7)	6,907	3,984 ($3,204 U.S.)	(12.3)	4,142	(9.6)	8,126
Less:										
Sinking funds	388 ($325 U.S.)		769		1,157	382 ($309 U.S.)		674		1,056
Term debenture	—		300		300	—		—		—
Repurchased debt	134 ($111 U.S.)		—		134	—		—		—
Net bonds, notes and debentures	2,315 ($1,919 U.S.)		3,001		5,316	3,602 ($2,895 U.S.)		3,468		7,070
Revolving borrowing facility	—		1,458		1,458	—		612		612
Long-term debt	$ 2,315		$ 4,459		$ 6,774	$ 3,602		$ 4,080		$ 7,682

* Weighted average coupon rate.

B.C. Hydro's long-term debt comprises bonds, notes and debentures, almost all of which have annual sinking fund requirements, and revolving borrowings obtained under a borrowing agreement with the Province. Long-term debt is presented net of related sinking funds, B.C. Hydro debt repurchased from the market and a term debenture receivable which has been committed to debt repayments. The March 31, 1989 foreign exchange rate used by B.C. Hydro was 83.86 U.S. cents per Canadian dollar.

GUARANTEE BY THE PROVINCE OF BRITISH COLUMBIA

B.C. Hydro's outstanding debt is either held or guaranteed as to principal, interest and premium, if any, by the Province.

SINKING FUNDS

Sinking funds are held by the Trustee, the Minister of Finance and Corporate Relations for the Province. Sinking fund income is recorded as a reduction of finance charges.

Sinking fund changes in the year comprised:	1989	1988
Instalments	$ 130	$ 102
Income reinvested	113	98
Surpluses recovered	—	(123)
	243	77
Withdrawals – debt repayment	(103)	(75)
– debt extinguishment	(25)	(100)
Foreign exchange adjustments	(14)	(22)
Total sinking fund changes	$ 101	$ (120)

TERM DEBENTURE

A term debenture has been issued to B.C. Hydro by B.C. Gas Inc. in part settlement of the sale of the Mainland Gas Service. B.C. Hydro has entered into a trust arrangement with the Province whereby the interest and principal payments from B.C. Gas Inc. are to be applied against B.C. Hydro's general indebtedness to the Province.

The term debenture bears interest at 10.75% per annum payable semi-annually and is repayable in four equal annual payments of $75 million on October 1 from 1990 to 1993. The debenture is secured by a first fixed mortgage on the assets of B.C. Gas Inc. and a guarantee from Inland Natural Gas Co. Ltd. B.C. Gas Inc. may repay the debenture at an earlier date.

REPURCHASED DEBT

Repurchased debt comprises B.C. Hydro bonds, notes and debentures purchased from the market but not cancelled or otherwise extinguished.

REVOLVING BORROWING FACILITY

Funds obtained under a borrowing agreement with the Province will be repaid either from the issue of bonds, notes or debentures or further revolving borrowings extending beyond the next fiscal year. They have, therefore, been classified as long-term debt. The borrowings under the agreement are unsecured, have an authorization limit of $2.0 billion and bear interest at prevailing money market rates. At March 31, 1989 these funds had a weighted average term to maturity of 116 days at an average coupon rate of 12.4% compared to 84 days and 8.7% as at March 31, 1988.

REDEMPTION PROVISIONS

Certain B.C. Hydro debt held by the Canada Pension Plan Investment Fund and by the Minister of Finance and Corporate Relations of the Province contains provisions allowing holders to redeem the debt prior to maturity, in whole or in part, subject to certain restrictions. At March 31, 1989 this debt amounted to $771 million (1988 – $752 million) net of sinking funds.

EXTINGUISHED DEBT

During the year, B.C. Hydro purchased and cancelled U.S. $181 million of bonds. In addition, sufficient government guaranteed securities were deposited in an irrevocable trust to satisfy the scheduled interest and principal repayment requirements of U.S. $299 million in bonds. These obligations are considered extinguished for financial reporting purposes and, together with the related securities, have been removed from B.C. Hydro's consolidated balance sheet. The accounting loss of $80 million arising from these transactions has been included in finance charges.

In fiscal 1988, B.C. Hydro deposited sufficient securities of the Province in an irrevocable trust to satisfy the scheduled interest and principal repayment requirements of Cdn. $100 million in bonds. These obligations are considered extinguished for financial reporting purposes and, together with the related securities, have been removed from B.C. Hydro's consolidated balance sheet. The accounting gain of $18 million arising from this transaction has been included in finance charges.

HEDGED U.S. DOLLAR DEBT

At March 31, 1989 U.S. $312 million (1988 – U.S. $315 million) of debt and future sinking fund instalments was hedged with forward exchange contracts. A further U.S. $436 million (1988 – U.S. $309 million) of debt was hedged by the holding of U.S. dollar denominated securities in sinking funds and repurchased debt. As a result of these transactions, as at March 31, 1989 B.C. Hydro had a net foreign currency exposure in U.S. debt of U.S. $1,607 million (1988 – U.S. $2,580 million).

CASH REQUIREMENTS

Total maturity payments and sinking fund instalments on bonds, notes and debentures outstanding as at March 31, 1989, by year of payment are disclosed in the following table. U.S. cash requirements are shown in millions of U.S. dollars. At March 31, 1989 there were 114 Canadian dollar (1988 - 124) and 15 U.S. dollar (1988 - 21) debt issues outstanding.

	Sinking Funds		Net Debt Maturities*		Total	
	U.S.	Cdn.	U.S.	Cdn.	U.S.	Cdn.
1990	$ 26	$ 46	$ 165	$ 282	$ 191	$ 328
1991	26	45	—	90	26	135
1992	26	44	—	180	26	224
1993	23	43	105	108	128	151
1994	23	42	—	111	23	153
1990-1994	124	220	270	771	394	991
1995-1999	116	188	—	275	116	463
2000-2004	106	123	—	64	106	187
2005-2009	80	17	—	118	80	135
2010-2014	34	2	2	—	36	2
	$ 460	$ 550	$ 272	$ 1,228	$ 732	$ 1,778

* Net debt maturities are determined after deducting sinking funds estimated to be available at maturity. This estimate is based on assumed earnings of 10.2% on existing sinking fund investments and future sinking fund instalments.

None of the above cash requirements are considered current as at March 31, 1989 as management intends to finance the payments from the issue of bonds, notes or debentures or further revolving borrowings extending beyond the next fiscal year.

NOTE 10 PREFERRED FUNDING

In November 1988, the Province provided $235 million of term cumulative preferred funding to B.C. Hydro. The preferred funding is redeemable in November 2008. The Province is entitled to annual dividends at rates that approximate market borrowing rates. Payment of dividends, which are cumulative, may be deferred in any year by the Board of Directors.

NOTE 11 PENSION PLAN

Employees of B.C. Hydro contribute to a jointly-funded pension plan which provides a defined benefit pension based on years of membership service and highest five-year average pensionable earnings. A portion of the required contributions under the plan is applied to provide for annual cost-of-living increases (indexing) to pensioners. Both the basic contribution and the indexing contribution are matched by B.C. Hydro. In addition, in both fiscal 1989 and 1988 B.C. Hydro made special annual contributions of $4 million to fund past service pension costs and accrued deficits which arose in prior years from plan amendments and changes in actuarial assumptions.

Annual actuarial valuations are obtained to determine the present value of the plan liability for pension benefits accrued to the date of the valuation. These actuarial liabilities are compared with the average market-related value of the pension plan assets to determine whether a net pension surplus or deficit exists. Based upon an extrapolation from preliminary actuarial valuation results as at December 31, 1988, the estimated present value of accrued pension benefits was $785 million as at March 31, 1989 and the pension plan assets available for these benefits at that date amounted to $804 million, resulting in a surplus of $19 million.

As a result of the sale of businesses the pension plan will incur additional costs. These costs are the future indexing of vested pensions provided to employees of the sold businesses who will no longer contribute to the plan and the cost impact of the removal of funds by those employees of the sold businesses who have elected to withdraw their accrued pensions from the plan. The actuary has estimated that the maximum cost to the fund should not exceed $50 million. B.C. Hydro has paid $15 million into the pension fund, and a further $35 million is held in trust to be paid into the fund, if needed, upon the determination of the final cost to the plan.

NOTE 12 COMPARATIVE FIGURES

Certain of the fiscal 1988 comparative figures have been reclassified to conform with the current year's presentation.

CORPORATE ORGANIZATION AND INFORMATION

as at March 31, 1989

BOARD OF DIRECTORS

[E] Lawrence I. Bell
Chairman

[E] The Hon. Jack Davis

Carol M. Gran, M.L.A.

[BDMP] Arthur L. Meyers

[AR] Charles E. Osterloh

[ABR] J. Guy Rose

[EM] William L. Sauder

[AD] Sandra D. Sutherland, Q.C.

[AB] John S. Waldie

[BM] Patrick D. Walsh

COMMITTEES OF THE BOARD OF DIRECTORS

[A] Audit Committee

[B] Budget Committee

[D] Donations

[E] Executive Committee

[M] Management Compensation

[P] Properties

[R] Reservoirs

OFFICERS

Lawrence I. Bell
Chairman

Christopher W.J. Boatman
Secretary

Tanis M. Stephenson
Assistant Secretary (until June 30, 1989)

Myra E.M. Watson
Assistant Secretary (from July 1, 1989)

Donna J. Lloyd
Associate Secretary (until May 1, 1989)

William W. Winnett
Comptroller

Raymond H. Hunt
Chief Engineer

Darlene M. Barnett
General Counsel

VICE-PRESIDENTS

(as at March 31, 1989)

Christopher W.J. Boatman
Corporate Affairs (from May 1989: Corporate and Environmental Affairs)

Arthur E. Geikie
Human Resources (until January 31, 1989)

Einar O. Field
Human Resources (effective February 1, 1989)

Raymond H. Hunt
System Development

Frank J. Klassen
Finance and Administration

John P. Sheehan
Finance

P. Donald Swoboda
Production

PEACE/WILLISTON ADVISORY COUNCIL

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Chairman

Barry J. Eyre
Fort St. John

Wayne Kelly
Fort St. John

Helena Mott
Fort St. John

Anita McWilliams
Hudson's Hope

Darell Orosz
Taylor

Bill R. Whalley
Mackenzie

COLUMBIA RIVER ADVISORY COUNCIL

Lawrence I. Bell
Interim Chairman

Hank Coleman
Nelson

Chris Dadson
Kimberley

Graham Kenyon
Rossland

Bill Lancaster
Golden

Ken Magnes
Revelstoke

Ken Marshall
Nakusp

Dianne Piket
Castlegar

SUBSIDIARIES ORGANIZATION AND INFORMATION

as at March 31, 1989

BRITISH COLUMBIA POWER EXPORT CORPORATION

DIRECTORS

Lawrence I. Bell
Chairman

Christopher W.J. Boatman

P. Donald Swoboda

John S. Waldie

Patrick D. Walsh

OFFICERS

Christopher W.J. Boatman
President and Chief Executive Officer

Douglas R. Forrest
Vice President, Marketing

H.D. Ken Epp
Vice President, Operations

Darlene M. Barnett
Corporate Secretary

POWERTECH LABORATORIES INC.

DIRECTORS

Graham P. Clarke
Chairman

Lawrence I. Bell

Arthur E. Geikie
President and Chief Executive Officer

Raymond H. Hunt

Charles E. Osterloh

Dale G. Parker

W. Randall Powell

OFFICERS

Lorne G. Wells
Vice President, Technical Services

Edward Gibson
Director of Administration

Blair Salter
Director of Marketing

Darlene M. Barnett
Corporate Secretary

B.C. HYDRO INTERNATIONAL LIMITED

DIRECTORS AND OFFICERS

Lawrence I. Bell
Chairman

Raymond H. Hunt
President

Christopher W.J. Boatman
Director

Stan A. Ridley
Vice President
Operations and Consulting Services

WESTECH INFORMATION SYSTEMS INC.

DIRECTORS

David McLean
Chairman

Dr. Bruce Gellatly

David Gillanders

Frank J. Klassen

Douglas L. MacKay

Robert J. Steele

P. Donald Swoboda

OFFICERS

Robert J. Steele
President and Chief Operating Officer

Darlene Barnett
Corporate Secretary

Frank J. Klassen
Treasurer

David McLean

VICE PRESIDENTS

Alan M. Donald
Vice President, Systems (Major Development)

Sherman D. Kwan
Vice President, Systems (Customers)

Geoff M. Yendole
Vice President, Systems (Corporate)

WESTERN INTEGRATED TECHNOLOGIES INC.

DIRECTORS

Frederick R. Wright
Chairman

Frank J. Klassen

P. Donald Swoboda

Donn E. Chalmers
President and Chief Executive Officer

OFFICERS

Donn E. Chalmers
President and Chief Executive Officer

D. Gregory Frank
Vice President, Finance and Administration

David A. Love
Vice President, Marketing and Acting Vice President, Technical Services

Robert J. Short
Vice President, Network Services

James V. Bozzard
Vice President, Operations

FRONT COVER: Excerpt from a letter printed in the Arrow Lakes News, March 22, 1989.

The financial section of this Annual Report is printed on text paper made from recycled fiber.

Additional information is available by requesting a copy of the 1989 Financial Review, published as a supplement to the Annual Report, or the B.C. Hydro Subsidiaries overview. Please write to our Information Centre or telephone 663-2114.

BC hydro

SUBSIDIARIES

BRITISH COLUMBIA POWER EXPORT CORPORATION

POWEREX

POWERTECH

POWERTECH LABS INC.
12388-88th Avenue, Surrey, B.C.
Canada V3W 7R7
Phone (604) 590-7500
Fax (604) 590-5347

British Columbia Hydro
International Limited

970 Burrard Street
Vancouver, B.C. V6Z 1Y3
Telephone: (604) 663-2360
Telex 04-54512
Fax: (604) 663-3727
Voice Mail: 663-4440

WESTERN INTEGRATED TECHNOLOGIES INC.

WESTECH
Information Systems Inc.

1045 Howe Street, 9th Floor
Vancouver, B.C. V6Z 2B1

(604) 663-3550
FAX: 663-3554

proud of our Service

BRITISH COLUMBIA HYDRO INTERNATIONAL LIMITED (BCHIL)

B.C. Hydro International offers solid consulting engineering experience in all aspects of utility operations to both the public and private sectors in Canada and internationally.

Already established as a partner to Canadian consultants and manufacturers, BCHIL has provided consulting and design and supply contracts with a variety of technological capabilities in Canada, China, Venezuela and Brazil.

Some of its major activities are the Canadian International Development Agency – China project where BCHIL, with other Canadian electric utilities, is providing training and technical assistance to a number of Chinese agencies. The company is also responsible for the design, supply and installation of unique generator air-gap monitoring technology, originally designed and developed by Hydro, on the 20 units of the 11 000 megawatt hydroelectric power plant in Venezuela.

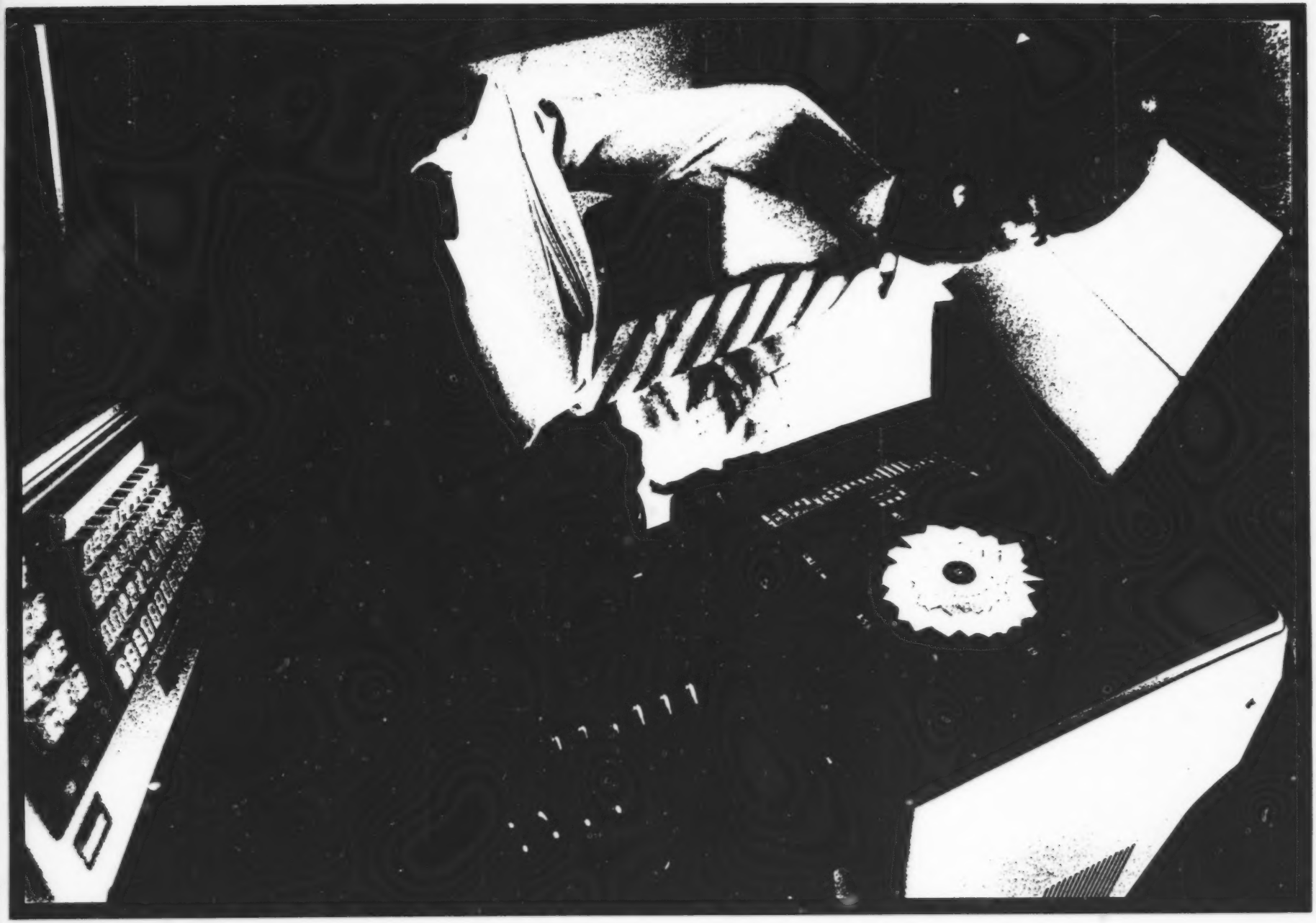
Within British Columbia, recent projects include providing technical assistance to Alcan Smelters & Chemicals Limited on their Kemano Completion Project, and conducting earthquake analysis work on the Greater Vancouver and Regional District's Cleveland and Seymour Falls Dams as a subconsultant to Klohn Crippen Consultants Ltd. BCHIL's wide range of services include:

- ☐ engineering management;
- ☐ civil, geotechnical, structural, hydraulic and hydrological engineering;
- ☐ electrical, electronic and mechanical engineering;
- ☐ electrical generating, transmission and distribution systems;
- ☐ communications and control systems;
- ☐ quality assurance and control.

In cooperation with the B.C. Hydro subsidiaries Powertech Labs, Westech Information Systems and Western Integrated Technologies, BCHIL now offers integrated and complementary consulting services ranging from PCB field testing and destruction systems to sophisticated management information systems.

BELOW: RAY HUNT, PRESIDENT AND CHIEF EXECUTIVE OFFICER

OPPOSITE: PROJECT MANAGER PAUL TOON USES COMPUTER TECHNOLOGY TO MONITOR THE CRITICAL AIR GAP BETWEEN ROTATING AND STATIONARY PARTS OF LARGE ELECTRICAL GENERATORS IN A UNIQUE SYSTEM DEVELOPED BY HYDRO INTERNATIONAL AND NOW BEING INSTALLED IN DAMS IN B.C. AND SOUTH AMERICA.



BRITISH COLUMBIA POWER EXPORT CORPORATION

Marketing British Columbia's firm electricity exports is now the responsibility of POWEREX. A new corporation established in December 1988 as a wholly-owned subsidiary of B.C. Hydro, POWEREX is now the sole agency for the export of firm electrical energy from British Columbia.

POWEREX is taking the lead role in negotiating and administrating export sales agreements with U.S. utilities and purchase agreements with electricity producers to ensure British Columbia makes the most of potential market opportunities.

Since April 1989, B.C. Hydro's short term interruptible exports have been handled by POWEREX. These sales include purchases from other utilities and private producers.

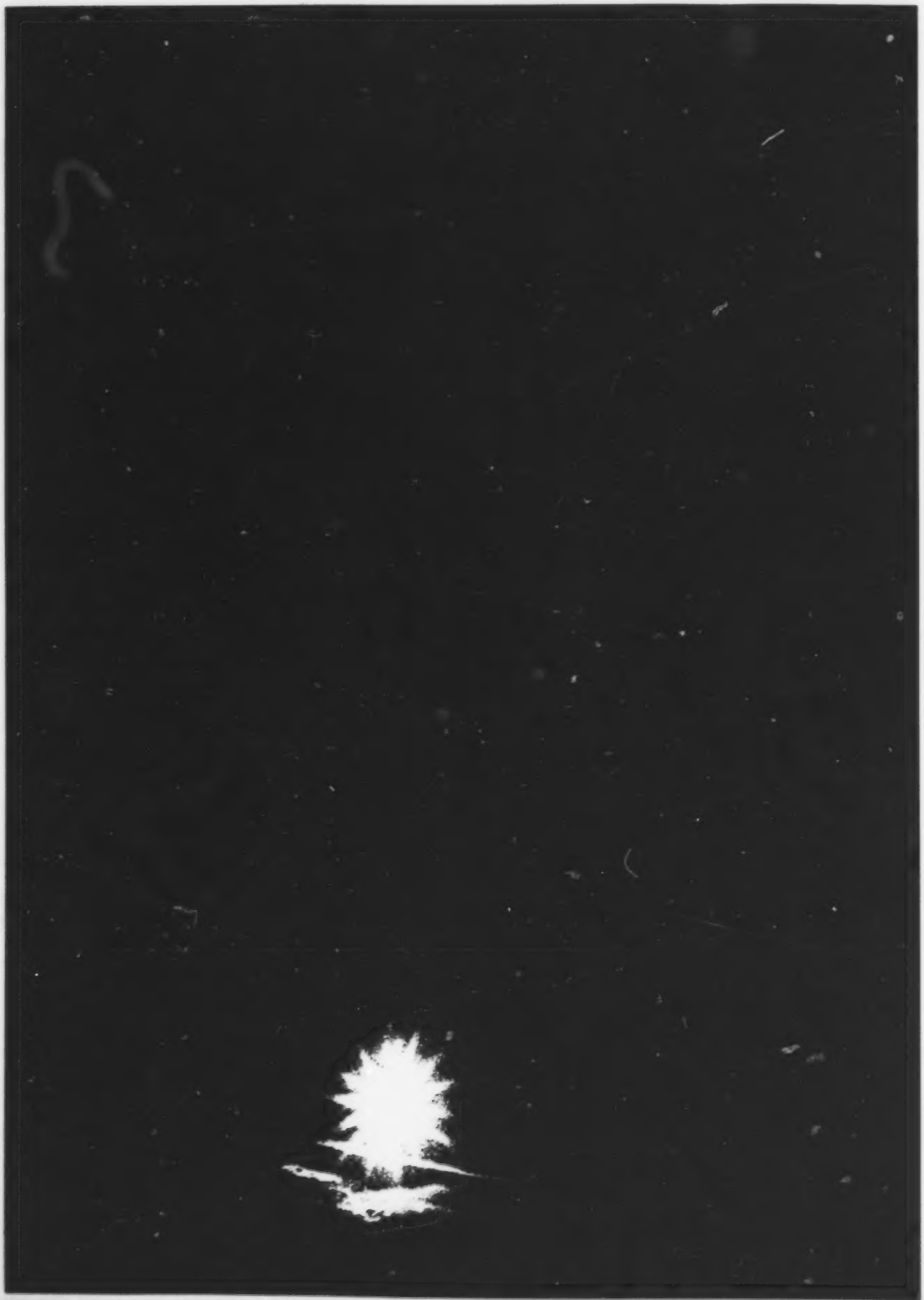
A call for Expressions of Interest from independent power producers interested in developing generation projects to serve potential long term American export markets brought responses from 13 different companies with head offices in Canada, the United States and Japan. The proposed projects totalled about 4000 megawatts of capacity and included coal, geothermal, hydroelectric, natural gas, refuse coal, waste heat/natural gas, waste wood and an interutility sale.

While making use of B.C. Hydro services such as transmission facilities required to access markets, POWEREX has also initiated discussions with Bonneville Power Administration and two investor-owned utilities regarding increased transmission capacity between British Columbia and the Pacific Northwest.

Export demand is anticipated to be about 600 megawatts by the mid 1990s and should increase substantially by the end of the decade.

BELOW: CHRIS BOATMAN, PRESIDENT AND CHIEF EXECUTIVE OFFICER

OPPOSITE: POWEREX IS TAKING THE LEAD ROLE IN NEGOTIATING AND ADMINISTRATING BRITISH COLUMBIA'S EXPORT SALES AGREEMENTS.



POWERTECH LABS INC.

What was once the Research and Development arm of one of North America's most cost and energy efficient utilities is now Powertech, offering multi-disciplinary problem-solving capabilities to industry at large.

Internationally recognized for its expertise in chemical, electrical and materials research, Powertech has solved problems for clients in numerous business and industrial sectors including mining, agriculture, transportation, oil, natural gas, manufacturing, government and utilities.

Powertech's "centres of excellence" provide experienced specialists working together to provide the right mix of practical and applied research and development techniques to ensure timely and effective solutions to engineering and operating problems.

BELOW: ARTHUR GEIKIE, PRESIDENT AND CHIEF EXECUTIVE OFFICER

For example, the combined skills of Powertech's chemical, electrical and materials research groups recently solved the problem of moisture ingress and freeze-thaw induced fracture of several types of porcelain insulators. The solution allows utilities to refurbish and protect insulators susceptible to this mode of failure.

Environmental innovation was shown with GEL-CAP, a tree-specific herbicide with reduced environmental and safety hazards developed by Powertech's chemists and engineers.

Electrical expertise includes high voltage and insulation research, electronics and electro-optics, systems studies and the high power lab for testing system equipment. In the area of materials research, Powertech assists with fracture mechanics, stress analysis, nondestructive testing, assessment of safety and reliability, sound and vibration control and civil engineering research.

Powertech's chemical research centres offer testing consulting services on fuels, lubricants and protective coatings, as well as environmental capabilities ranging from impact studies and toxic materials detection to PCB destruction including a recent breakthrough in developing an efficient and cost-effective method of destroying PCBs in transformer oil.

OPPOSITE: ERICH GNANDT, HIGH VOLTAGE RESEARCH AND TEST ENGINEER (TOP) AND ROBERT POLLOCK, TECHNOLOGIST LEADER – HIGH VOLTAGE RESEARCH PREPARE A FOUR MEGA-VOLT IMPULSE GENERATOR FOR A TEST OF A MANUFACTURER'S EQUIPMENT.

WESTECH INFORMATION SYSTEMS INC.

One of the newest entries in Canada's information systems consulting arena is Westech Information Systems, specializing in the design, development, maintenance and support of sophisticated integrated computer systems for business, industry and utilities.

Now the seventh largest company of its kind in Canada, Westech is one of two wholly-owned subsidiaries created in February 1989 from B.C. Hydro's Computer and Management Systems Division. It was recently responsible for the major redevelopment of Hydro's financial and business management systems encompassing 13 major business systems, and the revamping of 32 existing applications interfacing with the new system.

BELOW: BOB STEELE, PRESIDENT AND CHIEF OPERATING OFFICER

The Westech organization includes more than 200 employees, each with an average of over 12 years experience in computer systems. This wealth of expertise covers the areas of management consulting, systems development, consulting services in development centre and data resource management, application development consulting in design and programming, executive information systems, mini and micro computer services, communications and training.

With over three million lines of operational software, Westech has developed application software including that used in customer information and billing, human resources information and payroll, materials management, work management, geographical facilities information and financial and business management systems.

In addition to independent systems consulting, Westech is also marketing its services on a joint venture basis with North American consulting organizations.

Westech currently provides systems development and maintenance services to B.C. Hydro and extensive data processing services to B.C. Gas.

OPPOSITE: INTEGRATED COMPUTER SYSTEMS FOR BUSINESS, INDUSTRY AND UTILITIES RANGE FROM GEOGRAPHICAL FACILITIES INFORMATION TO BUSINESS MANAGEMENT APPLICATIONS. HANDS-ON ADVICE IS PROVIDED BY WESTECH MANAGING CONSULTANT IAN MCCRIRICK (LEFT) TO HYDRO METERMAN GREG TRONO.

WESTERN INTEGRATED TECHNOLOGIES INC.

One of British Columbia's leading information processing companies is Western Integrated Technologies, specializing in technical support and the operation of data processing environments.

With over 100 employees, Western manages approximately $25 million worth of state-of-the-art equipment and technology, including IBM, DIGITAL and SUN processors. These are interconnected via a data communications network of approximately 3000 work stations and local area networks.

In addition to operating a major information processing facility, Western applies the latest management techniques and products to solve a variety of clients' technical needs. This includes Information Processing Services available on a long term basis or for short term use to meet workload peaks.

A cost-effective alternative to operating and managing computer facilities is available through Western's Computer Facilities Management, where state-of-the-art technologies and management principles are supplemented by technical support to afford the highest level of service at the lowest cost.

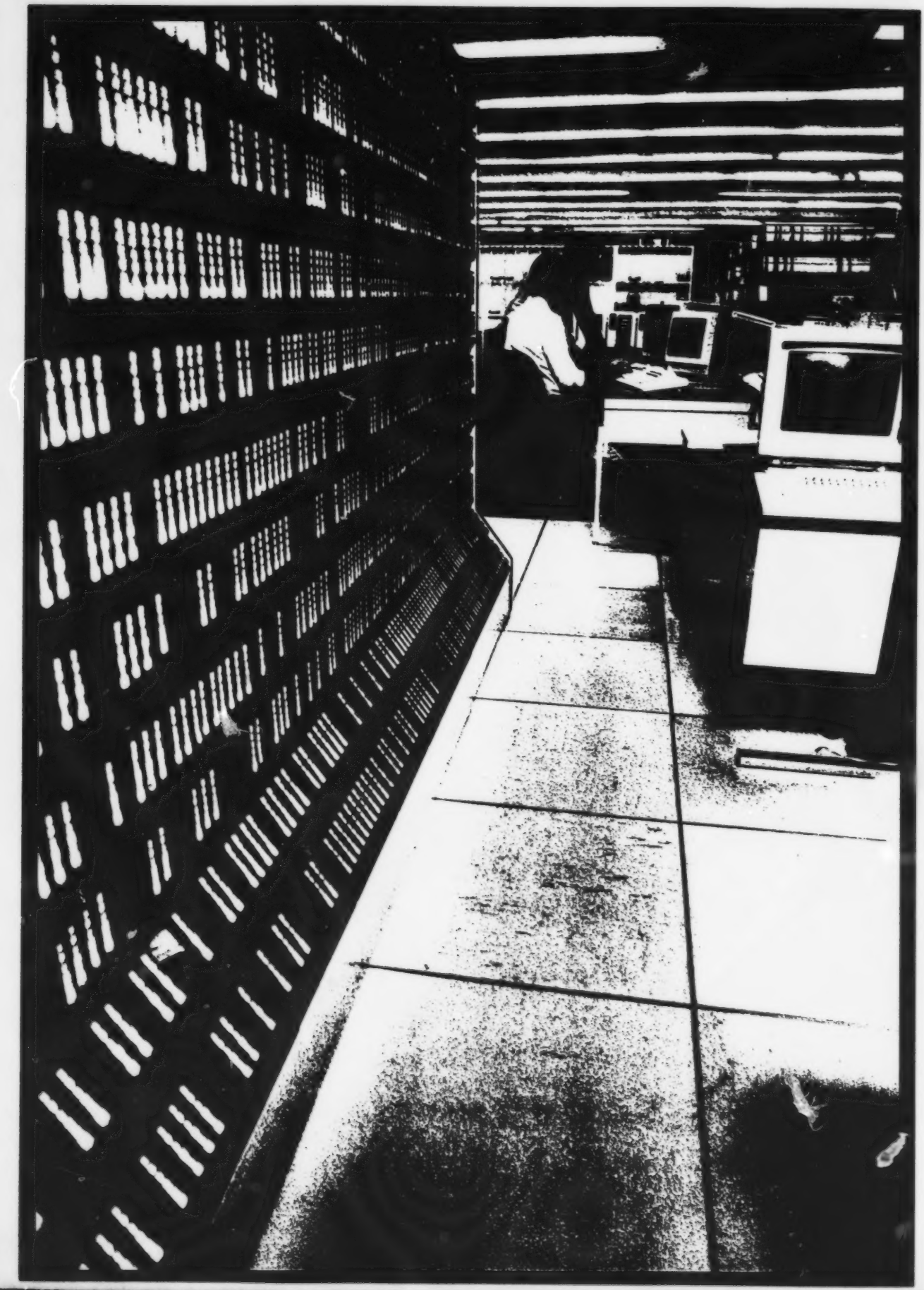
Computer-related Management and Technical Consulting assists clients with specific problems through project consulting on the latest operating systems, data base products, network interconnection, operations automation as well as other areas of data centre support and management.

Disaster Recovery Services are being developed for computer systems crippled by fire, sabotage, system malfunctions or other causes.

Western currently meets all of B.C. Hydro's commercial processing requirements, and provides services to Hydro subsidiaries as well as B.C. Gas and Vancouver Island Gas.

BELOW: DONN CHALMERS, PRESIDENT AND CHIEF EXECUTIVE OFFICER

OPPOSITE: MARC PELLOWS, COMPUTER OPERATOR II (SEATED) AND ED MCMURRAY, NETWORK CONTROL TECHNICIAN ARE AMONG THE MORE THAN 100 WESTERN INTEGRATED TECHNOLOGIES EMPLOYEES SPECIALIZING IN TECHNICAL SUPPORT AND DATA PROCESSING OPERATIONS.



For further information please contact:

BRITISH COLUMBIA HYDRO
INTERNATIONAL LTD. (BCHIL)
970 Burrard Street
Vancouver, B.C.
Canada V6Z 1Y3
Telephone: (604) 663-2360
Fax: (604) 663-3727

BRITISH COLUMBIA POWER
EXPORT CORPORATION (POWEREX)
666 Burrard Street
Vancouver, B.C.
Canada V6C 2X8
Telephone: (604) 663-3660
Fax: (604) 663-3644

POWERTECH LABS INC.
12388 - 88th Avenue
Surrey, B.C.
Canada V3W 7R7
Telephone: (604) 590-7500
Fax: (604) 590-5347

WESTECH INFORMATION
SYSTEMS INC.
Ninth Floor
1045 Howe Street
Vancouver, B.C.
Canada V6Z 2B1
Telephone: (604) 663-3550
Fax: (604) 663-3554

WESTERN INTEGRATED
TECHNOLOGIES INC.
Suite 704 - 1045 Howe Street
Vancouver, B.C.
Canada V6Z 2B1
Telephone: (604) 663-2824
Fax: (604) 663-3652